
IDAHO GROUND WATER QUALITY PLAN

Protecting
GROUND**WATER**
Q · U · A · L · I · T · Y
I N I D A H O



**AGRICULTURAL GROUND WATER
QUALITY PROTECTION
PROGRAM FOR IDAHO**

**prepared by the
Agricultural Chemical Subcommittee
and adopted by the
Idaho Ground Water Quality Council
February 1, 1994**

AGRICULTURAL GROUND WATER QUALITY PROTECTION PROGRAM

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PREFACE

Contained within the Idaho Ground Water Quality Plan are several items for implementing Policy II-B. This program has been developed to describe how agricultural activities and agricultural chemicals are to be managed for ground water protection. The following implementation features will be used in combination to accomplish the management objectives of the Agricultural Ground Water Quality Protection Program.

- Coordination of the existing Agricultural Pollution Abatement Plan, Nonpoint Source Management Plan, and the Ground Water Quality Plan.
- Coordination of the State Management Plan (SMP) for pesticides, as it is being developed to be consistent with the Ground Water Quality Plan.
- Development of an Information & Education Strategy.
- Development of the BMP Strategy.
- Development of the Regulatory Strategy.
- Establishment of an interdisciplinary team called the Agricultural Ground Water Quality Coordination Committee.
- Act upon the preliminary recommendations of the Agricultural Chemical Subcommittee to address potential agricultural sources of contamination (Agricultural Chemical Source Matrix).
- Act upon the recommendations of the Ground Water Program Interdisciplinary Team to make existing agricultural programs fully consistent with the Ground Water Quality Plan.

The progression from voluntary BMPs to a regulatory program is outlined in the first eight steps under Policy II-B. Step nine recognizes sources and activities already managed by an existing regulatory program. These steps are described in the Agricultural Ground Water Quality Protection Program as follows:

1. Voluntary BMPs will be the primary method of protecting ground water below the crop root zone.
2. The agricultural feedback loop is the method of choice to allow the development, implementation, evaluation and improvement of BMPs. The voluntary BMPs should be developed and implemented by the appropriate agencies on a site-specific basis with consideration for soil and crop characteristics and needs.

3. Based on the potential for a contamination [to occur] and [the] suspected cause, a specific time period will be set to determine effectiveness of BMPs in maintaining and improving ground water quality.
4. Effectiveness determination will be made by appropriate federal, state and local agencies including, but not limited to IDA, IDWR, NRCS, SCD, CES, and IDHW-DEQ.

Step four is the key trigger point in this program when water quality monitoring shows the ground water quality trend is not improving.

The result of the effectiveness evaluation determines the next course of action. The trigger points which determine which of the three options are available are detailed on page 69 of this program. The three options include:

5. If the ground water quality trend is not improving, then mandatory participation in applying voluntary BMPs is required.
6. If the ground water quality trend is still not improving, BMPs with more stringent protection must be applied.
7. If there is still no improvement in the ground water quality trend, regulatory programs will be required.

Step eight, below, may be used irrespectively of water quality monitoring or ground water quality trends. The regulatory option may be chosen based on high ground water vulnerability, chemical characteristics such as leachability, areas of significant use or a combination of these factors.

8. [New] Regulatory actions may be needed instead of BMPs as determined by a committee of appropriate agencies including but not limited to IDA, IDWR, NRCS, SCC, SCD, CES and IDHW-DEQ.
9. [Existing] Regulatory programs will also be applied when required by law. Step nine recognizes that some agricultural sources and activities are already managed by regulatory programs.

Footnote: text added to original language in Ground Water Quality Plan designated as []

INTRODUCTION

Agriculture accounted for 36% of Idaho's economy in 1991 (IASS, 1991). Considering the size and extent of this industry, it has the potential to place large demands on the state's resources. Mitigating agricultural impacts on ground water and preventing ground water contamination is a major challenge for the agricultural community and the agencies with agricultural program responsibilities.

In response, the **goal** of the Agricultural Ground Water Quality Protection Program is to protect the state's ground water and interconnected surface water from contamination originating from agricultural activities. The **purpose** of the program is to describe the management approaches to prevent ground water contamination and respond to the occurrence(s) of such ground water contamination.

The following are the **objectives** of the Agricultural Ground Water Quality Protection Program:

1. Identify agricultural sources of ground water contamination.
2. Identify and describe the management approaches.
3. Identify and describe implementation strategies.
4. Identify roles and responsibilities of agencies involved in the protection of ground water quality.
5. Provide basis for the development of an interagency Memorandum of Understanding which will solidify agency roles and responsibilities.
6. Describe how the Ground Water Quality Plan, the Agricultural Pollution Abatement Plan and the State Management Plan (SMP) for pesticides will interact and support the implementation of this program.
7. Inventory existing local, state, federal and industry agricultural ground water programs and assess the ground water protection capabilities of existing agricultural management programs.

SOURCES OF CONTAMINATION

The potential agricultural contaminant sources are:

- Agricultural chemical storage and handling.
- Agricultural chemical mixing and loading.
- Agricultural chemical application practices.
- Agricultural practices.
- Confined animal feeding operations.
- Agricultural chemical waste disposal.
- Aquaculture waste management practices.
- Injection wells and other underground disposal methods.
- Agricultural chemical spills.
- Urban/nonagricultural chemical uses.
- Land applied waste and wastewater.
- Agricultural waste disposal.
- Well construction and abandonment.

These potential agricultural contaminant sources and their impacts on ground water are further identified in the Agricultural Chemical Source Matrix (Appendix A, Table 1). The corresponding existing management programs and recommendations addressing program deficiencies are identified for each source in the matrix. The matrix also shows the appropriate implementation strategy(ies) for each recommendation. Note: recommendations commonly support using a combination of implementation strategies (I&E, BMPs, regulations/rules) for the most efficient program results.

MANAGEMENT APPROACHES

As stated in the Ground Water Quality Protection Act of 1989, it is the policy of the state to prevent contamination of ground water from any source to the maximum extent practical. Furthermore, the discovery of any contamination that poses a threat to existing or projected future beneficial uses of ground water will require appropriate actions to prevent further contamination. In order to attain these goals, Policy II-B of the Idaho Ground Water Quality Plan was specifically tailored to prevent ground water contamination from the unique practices found in agriculture. The two management approaches presented in this section direct the implementation of that policy.

PREVENTION APPROACH

Prevention is the primary means to protect ground water from contamination. The Prevention Approach (Figure 1) is followed whenever the potential for ground water contamination exists. This approach needs to be supported by basic assessment of water quality conditions from the Statewide Ambient Monitoring Network and other available baseline data. The Prevention Approach recognizes existing voluntary and regulatory programs and recommends the development of new programs to enhance the protection of ground water from impacts due to agricultural activities. (Additional information can be found in Appendix A, the Agricultural Chemical Source Matrix.)

Prevention actions include:

- **Implementation of the Information and Education Strategy in all situations.**

The following activities, conducted as part of this strategy, are the basis for the prevention of ground water contamination.

- Development and implementation of interagency coordinated Information and Education programs.
- Research, development and distribution of Application Management Guidelines (I&E).

(Additional information on the I&E strategy is found on page 72.)

- **Implementation of the Best Management Practices Strategy when sources can be controlled by BMPs.**

A determination of BMP appropriateness is required under this approach (an example of a BMP process is found on page 71). Criteria to be used in this determination include: chemical characteristics, ground water susceptibility/vulnerability, feasible schedule for implementation and achievement of corrective results, contaminant modeling, quantity and areal extent of chemical use.

If BMPs are determined to be appropriate, the following activities are conducted as part of this strategy.

- Research, development and application of Best Management Practices.
- Development of area-wide (i.e., conservation districts) and site-specific (i.e., farm) water quality management plans.

(Additional information on the BMP Strategy can be found on page 72.)

- **Implementation of the Regulatory Strategy when sources cannot be controlled by BMPs.**

If BMPs are determined not to be appropriate, existing or newly developed regulations that prevent unreasonable contamination, deterioration or degradation of ground water or interconnected surface waters are used or promulgated. (Additional information on the Regulatory Strategy is found on page 75. Also refer to the Agricultural Chemical Source Matrix, Appendix A.)

Prevention Approach Flowchart

Potential Contamination

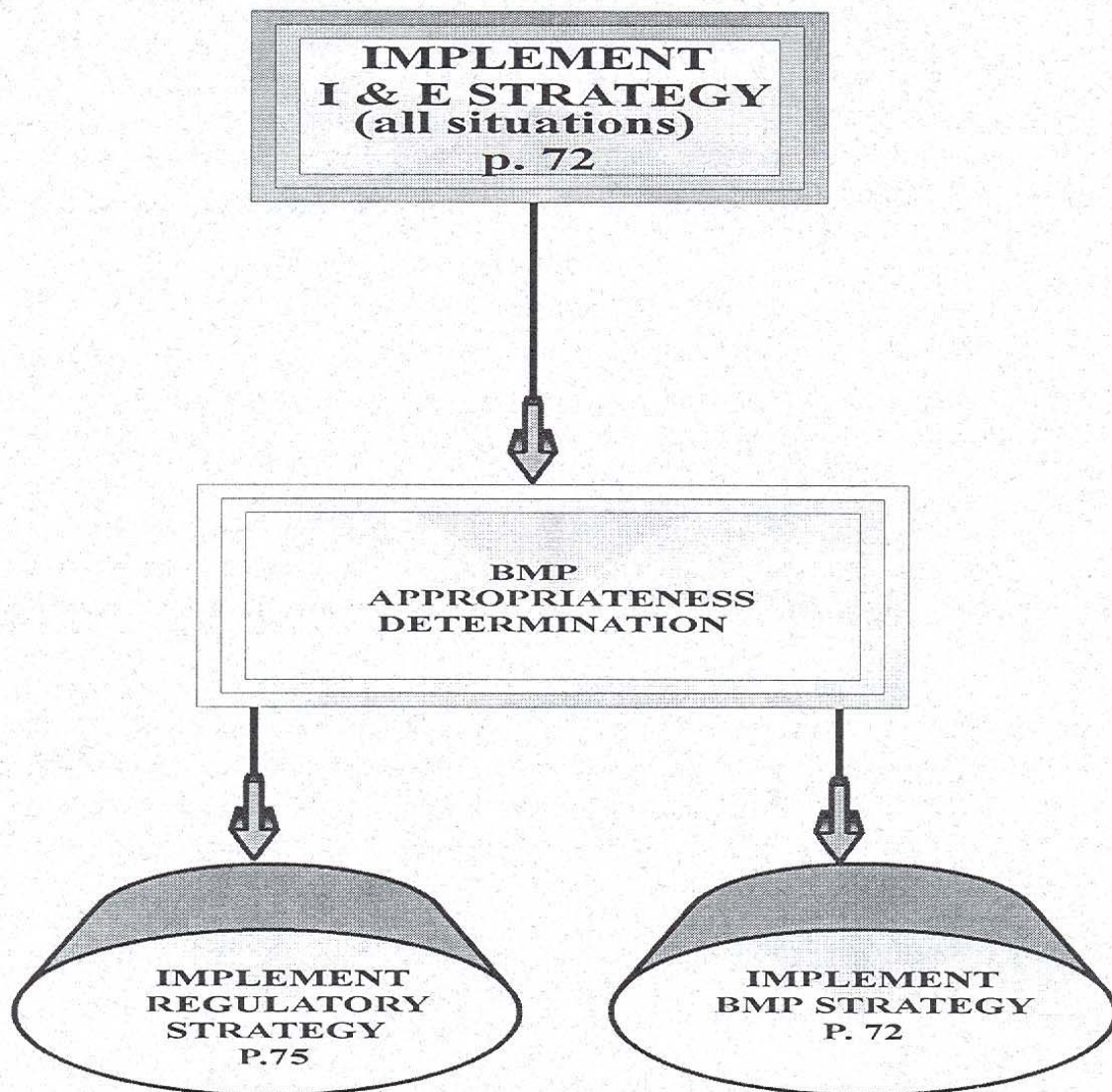


Figure 1. The Prevention Approach Flowchart is utilized when there is potential for ground water contamination originating from agricultural sources. Information and Education strategies will be implemented in all situations. Best Management Practices or regulatory strategies are options to be utilized.

RESPONSE APPROACH

A detection of an agricultural contaminant in ground water triggers the Response Approach. The Response Approach (Figure 2) begins with an investigation which is conducted to identify the cause, extent and severity of the problem. In the event a trend already exists and shows no improvement due to inadequate participation in a voluntary BMP, BMP participation and implementation will be increased and the BMP will continue. The investigation will be coordinated through the Monitoring Technical Committee. Results of the investigation will be utilized to determine compliance with existing regulatory programs and the subsequent response action(s). This approach needs to be supported by contaminant specific assessment on a regional and/or local basis.

Response actions include:

- **Implementation of the Information and Education, and Best Management Practices Strategies through the following activities in all situations.**
 - Secure an adequate level of BMP participation.
 - Continue monitoring and evaluate results for trends.
 - Conduct contaminant specific Information and Education programs for affected public.
 - Research, development and distribution of a contaminant specific Application Management Guidelines.
 - Research, development and application of contaminant specific BMPs.
 - Develop contaminant specific area-wide (i.e., conservation districts) and site-specific (i.e., farm) water quality management plans or water quality provisions within an existing plan.
- **Implementation of Regulatory Strategy when:**
 - Multiple agricultural chemical detections and water quality standards are exceeded.
 - Isolated detections occur resulting from the lack of BMP implementation.
 - Water quality management plan objectives are not met, or trends are not improving after the voluntary BMP strategy has been established and BMPs are fully implemented (see page 79).

Regulatory responses to agricultural contamination may include mandatory implementation of BMPs, or result in the restriction or prohibition of certain agricultural activities or chemicals. The regulatory response will be utilized to address specific chemicals or areas of concern and will be used in conjunction with I&E and BMP strategies.

As regulatory programs are implemented, they will be periodically evaluated for effectiveness in responding to these concerns. Results of this feedback will be provided through a Regulatory Actions Group in order to ensure continuity in this strategy.

RESPONSE APPROACH FLOWCHART

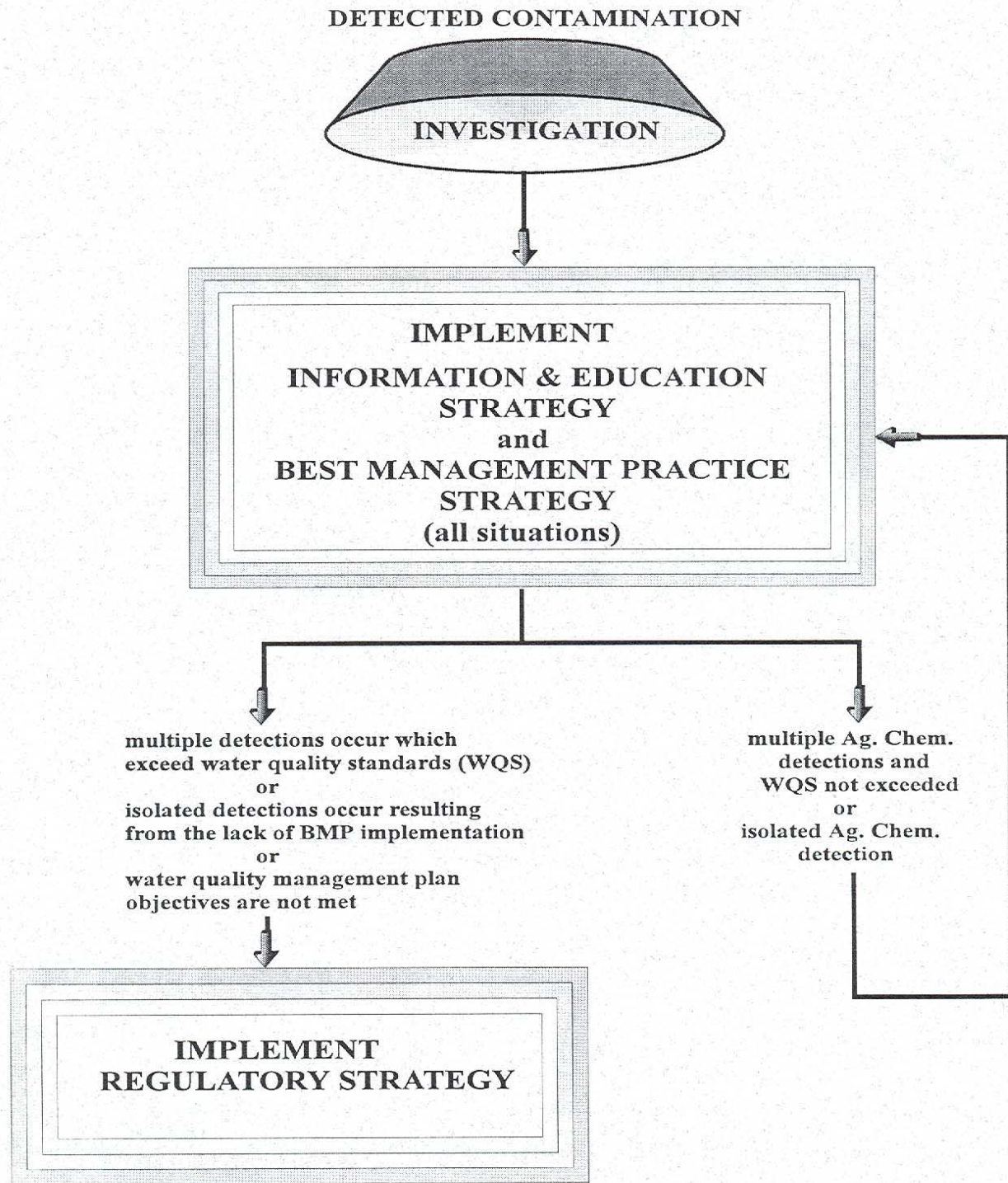


Figure 2. The Response Approach Flowchart is utilized when there has been contamination detected in ground water which may have originated from an agricultural source. An investigation follows the detection of a contaminant. Following the investigative period, information and education along with Best Management Practices strategies are implemented. A regulatory strategy may be implemented if certain conditions are not achieved.

IMPLEMENTATION STRATEGIES

The Information and Education, BMP and Regulatory Strategies are integral components of both the prevention and the response approaches.

THE INFORMATION AND EDUCATION STRATEGY

This strategy supports the intent of Policy III-A which is an informed public is more likely to prevent contamination voluntarily and without the need for regulatory programs.

The Information and Education (I&E) strategy relies chiefly on current research-based publications by entities such as the Cooperative Extension System and the Agricultural Experiment Stations (i.e., University of Idaho's Fertilizer Guides and Pest Control Recommendations). The focus of these publications is on scientific information, emphasizing practices and procedures developed specifically for highly sensitive activities, leachable compounds, and vulnerable ground water areas. This information is used to develop agricultural chemical/ground water protection I&E programs which are promoted through seminars, workshops, pamphlets, and public announcements. These scientific guidelines are used as the basis for the development of Best Management Practices (BMPs) or regulations if required in the future.

Many state and federal agencies, institutions and industry groups are currently involved in agricultural ground water I&E activities. These diverse activities are inherent to BMP and Regulatory Strategies for ground water quality protection. The primary goal of I&E is to encourage implementation of a BMP or component practice, either independently or through participation in agricultural water quality projects or programs.

The University of Idaho is designated as the I&E clearinghouse and will facilitate coordination of agricultural I&E efforts for the state.

THE BEST MANAGEMNT PRACTICES STRATEGY

Voluntary implementation of Best Management Practices (BMPs) is expected to be the primary and most effective method of protecting ground water beneath crop root zones. (Number 1 of 9 implementation steps in GWQ Plan.) BMPs consist of compatible, interacting component practices. In Idaho, component practices used in the development of agricultural BMPs are identified in the Agricultural Pollution Abatement Plan (APAP). These component practices are based on standards and specifications adopted by the USDA Natural Resource Conservation Service (NRCS) and information published through the University of Idaho-Cooperative Extension System (CES).

A site-specific BMP is developed to address the potential impact(s) that a particular activity has on surface water and ground water quality. It is designed by an experienced conservationist or resource specialist and is based on contaminant characteristics and site information along with the landowner/producer's needs and capabilities. Due to the many parameters considered in BMP development, each BMP is site specific. The typical process used in developing a BMP is shown in Figure 3 which illustrates three possible BMP alternatives (component practice combinations).

An interagency/multidisciplinary BMP Technical Committee has been established through the APAP to develop, evaluate and improve BMP component practices. The BMP Technical Committee is chaired by the Idaho Soil Conservation Commission (SCC) and its membership is composed of representatives from agencies signatory to the Nonpoint Source MOU and other agencies as appropriate. At the local level, Soil Conservation Districts (SCD) have responsibilities to identify the need for new or improved BMP component practices and to provide for public input.

Ultimately, water quality improvements and maintenance are achieved through performance evaluations and refinement of BMPs. Performance evaluations are based on water quality monitoring results, field audits of BMP implementation and facility inspections to identify potential sources. Performance evaluations are completed through an interagency BMP effectiveness subcommittee using the BMP Feedback Loop process detailed in the section on Mechanisms for Implementation, page 77.

DEVELOPMENT OF IRRIGATED CROPLAND BMP USING COMPONENT PRACTICES

Situation: Beneficial Use Impaired - DRINKING WATER SUPPLY
Potential Contamination - NUTRIENT (NITROGEN)
Source - NITROGEN FERTILIZER APPLIED TO CROPLAND
Land Use - IRRIGATED CROPLAND (SURFACE)

**Procedure: CONDUCT RESOURCE INVENTORY AND SITE ASSESSMENT,
EVALUATE DATA TO DEVELOP ALTERNATIVE BMPs**

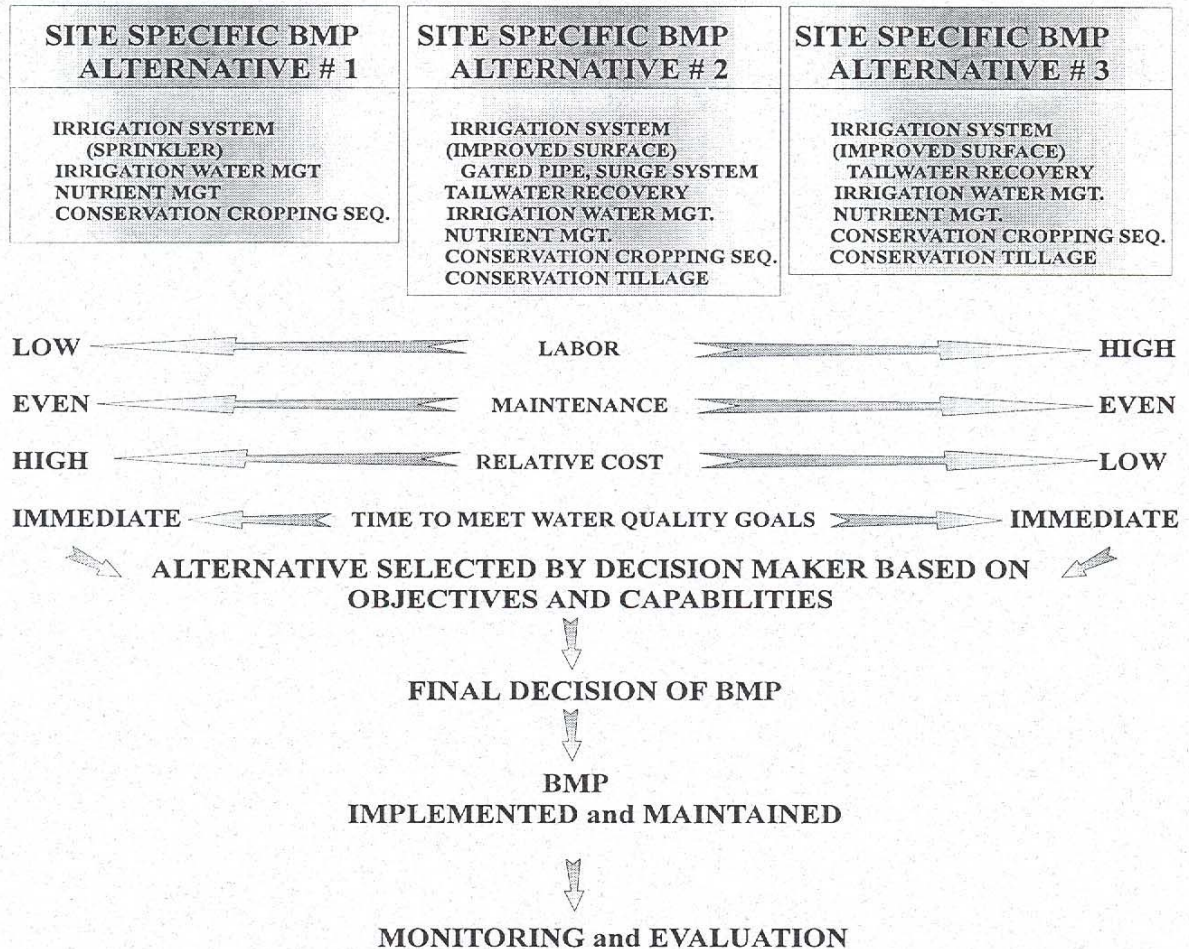


Figure 3. Component practices are used alone or in combination as a part of a Best Management Practices process to improve ground water quality. The irrigated cropland BMP may utilize various component practices. These practices are organized as alternatives, and through a decision making process the appropriate alternative is chosen. The BMP is implemented and monitored for effectiveness following the theory of the BMP Feedback Loop.

THE REGULATORY STRATEGY

State and federal authorities regulate certain agricultural products and activities which have high potential for impacting ground water. (Number 9 of 9 implementation steps in GWQ Plan.) The regulatory strategy can require mandatory implementation of BMPs, regulatory enforcement can require mandatory implementation of BMPs, prohibit or restrict the use of certain agricultural chemicals or activities, and require preventive procedures for the control of potential sources of contamination.

The following is a list of existing state regulatory authorities govern agricultural activities that can impact ground water.

1. Title 39, Chapter 1, Idaho Code (Environmental Health and Protection Act).
2. Title 22, Chapter 34, Idaho Code (Idaho Pesticide Law).
3. Title 22, Chapter 6, Idaho Code (Idaho Fertilizer Law).
4. Title 22, Chapter 14, Idaho Code (Idaho Chemigation Law).
5. Title 42, Chapter 2 and 39, Idaho Code (Underground Injection Control Program and Well Construction Standards).
6. Title 39, Chapter 1, Idaho Code (Idaho Water Quality Standards and Wastewater Treatment Requirements).
7. Title 22, Chapter 34 and Chapter 6, Idaho Code (Secondary Containment Law).
8. Ground Water Quality Regulations are under development pursuant to Title 39, Chapter 1.
9. State Management Plan (SMP) for pesticides is under development pursuant to FIFRA.
10. Title 67, Chapter 52, Idaho Code (Idaho Public Drinking Water Regulations).

The EPA retains oversight responsibilities for these Congressional Acts while state agencies have the task of implementing these acts through state programs.

Recommendations concerning the use of regulations to manage potential agricultural sources of ground water contamination are shown in the Agricultural Chemical Source Matrix (Appendix A) Regulatory Actions may be needed instead of BMPs as determined by a committee of appropriate agencies, including but not limited to IDA, NRCS, SCC, SCD, CES, and IDHW-DEQ. In the event that new regulatory programs become necessary to augment existing programs, it is recommended that the Regulatory Action Group facilitate interagency coordination and assure consistency with existing programs. This approach is intended to enhance, not replace, the regulatory development process initiated by the agency with specific authority. Recommendations from the Regulatory Action Group will be submitted through the Ground Water Quality Coordination Committee to the appropriate agency for action. (Number 8 of 9 implementation steps in the GWQ Plan.)

MECHANISMS FOR IMPLEMENTATION

To accommodate implementation of the many agricultural programs, several mechanisms have been and are being developed to clearly define roles and responsibilities. The following is a compilation of mechanisms for implementation of the Prevention and Response Management Approaches.

COORDINATION COMMITTEE

An Agricultural Water Quality Coordination Committee will be established. The objectives of the committee will be to facilitate, coordinate, and ensure consistency of all components of the state's Agricultural Ground Water Quality Protection Program. These components include the Ground Water Quality Plan, the Nonpoint Source Management Program, Agricultural Pollution Abatement Plan, State Management Plan (SMP) for pesticides, and coordinated Nonpoint Source Water Quality Monitoring Program. This committee is intended to enhance, not replace, the regulatory process initiated by an agency with specific program authority.

The Coordination Committee will be responsible for assuring that the appropriateness of implementing a BMP vs. regulatory strategy will be handled by the appropriate agency, and will solicit input from the Technical, Monitoring, Effectiveness, and Regulatory Groups in making such determinations. (Recommended criteria to be utilized in this process are discussed on page 66 and 67.) This committee will also ensure that ground water quality management is coordinated with surface water quality management for the protection of both resources, and will act to facilitate the overall program evaluation process. The State Management Plan (SMP) for pesticides and the Coordinated Nonpoint Source Water Quality Monitoring Program ensure a consistent overall program. This committee will ensure that ground water quality managements are coordinated with surface water quality management for the protection of both resources. The Agricultural Ground Water Quality Coordination Committee will perform in an advisory capacity and will report to the Ground Water Quality Council or its successor, or in their absence will be advisory to the agency with specific program authority.

The Coordination Committee will accomplish these objectives through participation in appropriate groups and committees including but not limited to the following:

Existing Committee(s)

- BMP Technical Committee
 - Existing under the APAP; to develop and improve component practices approved for designing agricultural BMPs; SCC chaired.
- BMP Effectiveness Subcommittee
 - Existing under the APAP; as part of BMP Technical Committee; to close the gap in the BMP Feedback Loop through quantifiable methods; identify sources for BMP cost sharing and incentives; SCC chaired.

- Monitoring Technical Committee
 - To be restructured under the Coordinated NPS Water Quality Monitoring Program; to establish and maintain a coordinated regional and local ground water quality monitoring effort consistent with the Ground Water Quality Plan; encourage ground water monitoring data be submitted to the state's EDMS; DEQ chaired.

Future Committees and Work Groups to be Established

- Information & Education Coordination Group
 - To be established; to oversee consistent delivery in agricultural I&E programs to all audiences on a statewide basis.
- Regulatory Action Group
 - To be established; to review status of Ag Chem Matrix recommendations and recommend new regulatory programs that become necessary.

The Idaho Department of Agriculture will be responsible for the administration and coordination of the Agricultural Ground Water Quality Committee. The committee will be composed of one representative from the Idaho Association of Soil Conservation Districts (IASCD) and appropriate state and federal agencies including, IDHW-DEQ, IDA, IDWR, SCC, CES, EPA, and NRCS. Additionally, this group will include a representative from each of the following: an environmental group, agricultural chemical industry, agricultural producers, and an education and research group. The membership of the Agricultural Ground Water Quality Coordination Committee may be adjusted to include additional federal and state agencies, water user groups, local government representatives, or other stakeholders approved by a majority vote of either the Ground Water Quality Council, or its successor.

This committee will solicit comments from the general public and will provide opportunities for local participation and review. This committee will also coordinate the activities of the various work groups and committees relative to agricultural ground water programs.

BMP FEEDBACK LOOP

The BMP Feedback Loop is a process to reduce nonpoint source water pollution through the development, installation, evaluation and refinement of BMPs. (Number 2 of 9 implementation steps in GWQ Plan.)

This process originated in the Idaho Water Quality Standards and Wastewater Treatment Requirements. Using established standards, the BMP Feedback Loop Process proceeds through the following steps:

Step 1. Water Quality Criteria

Water quality criteria to protect the identified beneficial use(s) must be established along with a water quality monitoring plan.

Step 2. BMP Development/Improvement

Factors for BMP development and improvement are technical feasibility, economic feasibility and social acceptability. The following will be considered during the BMP development/improvement step:

- Existing water quality characteristics.
- Predetermined water quality criteria.
- Characteristics of the site including soils, slope, climate, vadose zone properties, ground water vulnerability, direction and gradient of ground water flow.
- Characteristics of the crop including related rotational sequences and production practices.
- Characteristics of chemicals used including leaching potential, persistence, solubility, absorption properties, and application practices.
- Current technology based on research and demonstration of the practice.
- Wellhead protection areas, areas of drilling concern, special ground water management areas, sole source aquifers, special resource waters or an aquifer categorization.

Step 3. Implementation and Maintenance

The BMP is implemented on-site by land owners and managers through local, state, or federal projects and programs. BMP implementation and maintenance is typically supported with state and federal cost-share monies and are coordinated through area-wide and site-specific water quality management plans.

Water quality management plans include:

- Provisions for baseline and trend water quality monitoring.
- Specific time frames for implementation and evaluation based on potential for a contamination and the suspected cause. (Number 3 of 9 implementation steps in GWQ Plan.)
- Water quality protection objectives.
- Level of participation to meet objectives.
- Provisions to determine technical and economical feasibility and social acceptability.
- A description of the farm operations, including crops, livestock and equipment.
- A description of farm resources, including soil and hydrogeologic characteristics.
- The specific agricultural BMPs to be implemented, maintained and improved as needed.
- Provisions for an effectiveness evaluation including water quality, and BMP adequacy.

- Recommendations for application rates and disposal methods for nutrients, pesticides, and animal waste materials.

Step 4. Effectiveness Evaluation

The BMP effectiveness in achieving the predetermined water quality criteria is evaluated by comparing monitoring data and identified trends. The BMP Effectiveness Subcommittee is responsible for this determination and for verifying water quality goals and monitoring procedures (Number 4 of 9 implementation steps in the GWQ Plan.)

Effectiveness evaluations occur on a predetermined time schedule as established in the water quality management plan and includes a review and report on the following criteria:

- Verification that the BMP is installed and functioning as designed.
- The predetermined water quality objectives and crop production needs are met.
- Comparison of the water quality monitoring data to pre-established water quality criteria.
- Confirmation of the level of participation through on-site evaluations.
- Water quality monitoring to detect contaminants and track trends.
- Confirmation that ground water directed BMPs do not adversely impact surface water or other natural resources.

If the criteria are achieved and the BMP is adequate as designed, implemented and maintained, then the FBL will continue. If the criteria are not achieved due to lack of participation, then necessary participation in applying the BMPs must be secured. If participation is adequate and criteria are still not achieved, then the BMP will be improved, the process of the feedback loop will continue, and rules/regulations will be applied if appropriate. (Number 5, 6, and 7 of 9 implementation steps in the GWQ Plan.)

The following depicts the "BMP Feedback Loop" which is used to complete the BMP process (Figure 4).

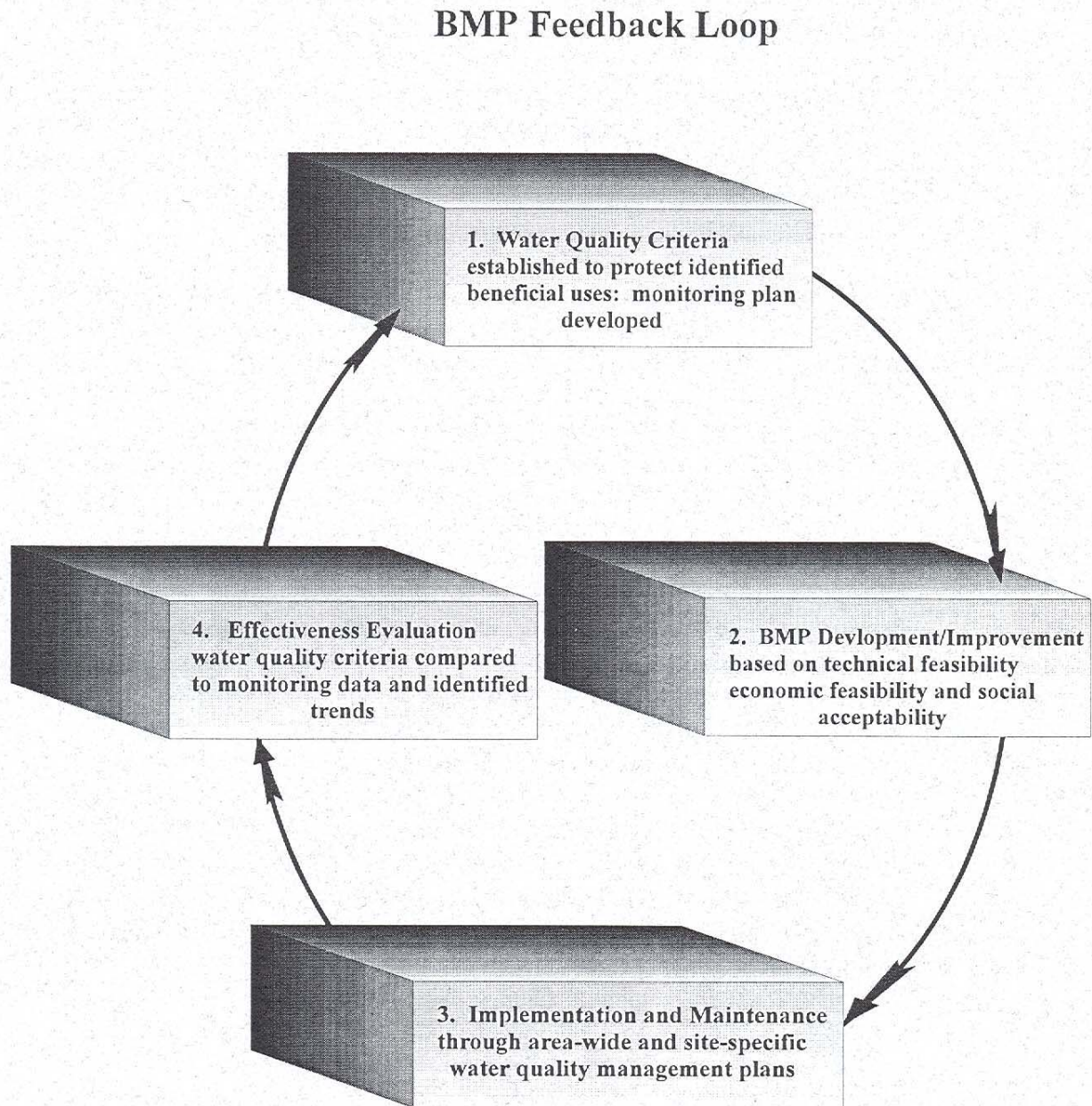


Figure 4. The BMP Feedback Loop is a process to reduce nonpoint source water pollution through the development, installation, evaluation, and refinement of BMPs.

WATER QUALITY MANAGEMENT PLANS

The intended purpose of a water quality management plan is to provide agricultural producers with guidance and information needed to comply with state and federal water quality laws and to maintain or enhance water quality to support designated beneficial uses. Owners and operators of lands where the potential for ground water contamination exists should request assistance to develop and implement water quality management plans. In most instances, this can be accomplished by establishing a cooperative agreement with the appropriate land management agency which includes water quality goals as part of an overall farm management plan.

Water quality management plans may be area-wide (i.e., conservation districts) or site-specific (i.e., farm). The provisions to address water quality management may already exist through some state or federal programs such as the State Agricultural Water Quality Program (SAWQP) or the USDA Water Quality Incentive Program (WQIP). In such cases, a separate plan does not need to be developed; rather, the provisions of the existing water quality management plan will be included in the overall farm management plan or an on-farm cooperative agreement.

Since the main goal is to protect ground water, the intent of an operative water quality management plan is that it should apply to all farmers irrespective of their involvement in a state or federal program or project. It is by applying the prevention and protection policies of the Ground Water Quality Plan to land use activities, including agricultural activities, that this goal can be achieved. Therefore, in all cases, an operative plan should be comprehensive with appropriate state and federal coordination.

The major component of a plan is typically the implementation and maintenance of BMPs. Step 3 of the BMP Feedback Loop, describes how this mechanism can be utilized in support of a water quality management plan. Other provisions may address information and education activities and pertinent regulatory controls.

EVALUATIONS

Implementation Strategy Evaluations

An important part of the Agricultural Ground Water Quality Protection Program is the evaluation of its Implementation Strategies. This evaluation will determine whether the selected implementation strategy(s) are working effectively. This process will identify future needs for I&E, BMPs or regulatory controls.

Evaluation of the applicability, use and acceptance of I&E and Application Management Guidelines will need to be conducted by the I&E Coordination Group. To implement the BMP Feedback Loop, the BMP review process was initiated to determine the adequacy of component practices, participation level for each specific BMP, and protection of surface and ground water.

The BMP Effectiveness Subcommittee is responsible for coordinating closely with the BMP Technical Committee and overseeing BMP effectiveness, closure of the BMP Feedback Loop process and the workability of each water quality management plan. The results of water quality monitoring will be used in the evaluation process to determine the need for new or improved BMPs, or for a regulatory response. The results of effectiveness reviews should be incorporated into water quality monitoring plans as they are developed or revised.

Agricultural chemical use will be monitored to determine regulatory compliance and whether the rules/regulations are effectively protecting ground water quality. The Regulatory Action Group will assess the performance of current regulatory programs and make recommendations to the Agricultural Coordination Committee for additional regulatory activities that may be needed to protect ground water.

Overall Program Evaluations

The Agricultural Chemical Ground Water Coordination Committee is responsible for ensuring that overall program evaluations are accomplished. Evaluations of the Agricultural Ground Water Quality Protection Program must use a combination of water quality management plan effectiveness reviews and data from ground water monitoring. The findings of effectiveness reviews are compiled and assessed to determine the success of implementing the Agricultural Ground Water Quality Protection Program. Review criteria for water quality management plans include:

- Attainment of goals for installation of BMPs.
- Attainment of a minimum level of participation.
- Attainment of goals for reduction of contaminant loadings.
- Contribution toward meeting state water quality goals.
- Prudent use and management of public funds.

GROUND WATER MONITORING

Water quality monitoring is the primary means of determining success of the Agricultural Ground Water Quality Protection Program. Agricultural ground water monitoring components, including monitoring protocol, will be consistent with the Coordinated Nonpoint Source Water Quality Monitoring Program for Idaho (Clark, 1990), the Ground Water and Soils Quality Assurance Project Plan (QAPP) Development Manual, (G. Winter, 1993) and the Idaho Ground Water Quality Plan (GWQC, 1992). The scale of monitoring will be assessed on a project-by-project basis to coordinate and utilize existing monitoring efforts and the project goals.

Monitoring Objectives

Monitoring objectives are based on existing or potential ground water contamination issues and the data needs of the water quality management plan. As a general rule, initial monitoring objectives include:

- Establishing the current status of beneficial uses.
- Identifying and qualifying the contaminants and their sources.

The purpose, scale, and duration of monitoring efforts will be conducted at one of the following three levels:

- Statewide ambient monitoring incorporates a random baseline monitoring network throughout the state which may identify areas of water quality concerns. When water quality problems are identified through the statewide monitoring network, they are referred for follow-up to the regional and local monitoring programs as defined in the Ground Water Quality Plan.
- Regional monitoring identifies and assesses nonpoint source contamination, particularly in areas of high vulnerability. Additionally, this level of monitoring determines needs to be addressed through the application of BMPs and subsequent effectiveness evaluation.
- Local monitoring applies to specific sites to be investigated in order to delineate the source and extent of contamination. Secondly, this level of monitoring may be used to evaluate the effectiveness of BMPs.

Monitoring Plans

To fully implement the BMP Feedback Loop process in accordance with the Idaho Water Quality Standards, a project monitoring plan is required for each new water quality management plan. Project monitoring plans are to be jointly developed by IDA, IDHW-DEQ and other agencies as appropriate. The purpose of this plan is to address the specific objectives of the management plan, as well as those of this program. Upon completion of the monitoring effort, a Water Quality Status Report will be issued through IDHW-DEQ for all contracts. When a project monitoring plan is developed, a number of steps may be taken to ensure water quality protection. The following actions will be considered in the development of project monitoring plans:

- Identification of any potential sources of contamination within a localized area.
- Categorization of appropriate local concerns into monitoring objectives.
- Selection of parameters that can be used to address each objective.
- Design of an appropriate monitoring strategy.
- Identify procedures for conducting follow-up investigations.

The development and use of ground water monitoring protocol will provide a more detailed framework for the formulation of project monitoring plans. Through established protocol the monitoring plan activities will enhance the success of water quality management plans.

GIS MAPPING/SUSCEPTIBILITY/VULNERABILITY

A useful mechanism for visualizing the potential impact of land use activities on ground water is the Geographical Information System (GIS) for computer mapping. Two types of ground water mapping that are being developed and used in Idaho are:

- Ground Water Susceptibility Mapping- entails the compilation and evaluation of relevant data on the physical system which includes depth to ground water, availability of recharge and soil types. The data is combined using GIS technology to indicate the potential for movement of any contaminant to ground water.
- Ground Water Vulnerability Mapping- adds data layers to the layers used in susceptibility mapping. The additional data layers describe potential contaminant sources and/or contaminant loading that can impact ground water quality.

Susceptibility/vulnerability mapping is commonly used in conjunction with other implementation mechanisms. Areas of high susceptibility/vulnerability can be given priority for implementing ground water activities. Ground water monitoring and evaluation can be directed to ensure that protective actions are effectively used in areas of concern.

Susceptibility/vulnerability maps are designed to predict the degree of vulnerability assigned to a given area. The degree of vulnerability directly influences the type of land use practice required to keep contaminants from entering ground water. The maps can be used in the management of point and nonpoint sources of contamination that can improve ground water quality, including agricultural activities and agricultural chemicals.

Overall, ground water susceptibility/vulnerability mapping is still in the applied research stage in Idaho. At this time the mapping approaches are site-specific and no statewide methodology or rating system has been adopted.

MEMORANDA OF UNDERSTANDING

Two MOUs address roles and responsibilities for agriculturally related ground water quality programs. The first MOU entitled *Memorandum of Understanding Implementing the Nonpoint Source Water Quality Program in the State of Idaho* addresses the implementation of nonpoint source water quality provisions of the Federal Clean Water Act. This MOU was signed by the EPA, IDL, SCC, USDA-NRCS, IDHW-DEQ, IDA, IDWR, USDA-CES, USDA-ASCS, BLM, and the USFS. Through an appendix to this MOU, signatories further agreed to implement the Agricultural Pollution Abatement Plan (1991) by the directives included in the Ground Water Quality Plan, 1992, and to provide assistance in the development of a State Management Plan (SMP) for pesticides.

The second MOU is a Memorandum of Understanding (MOU) between IDHW-DEQ, IDWR and IDA related to the implementation of the Ground Water Quality Plan for the State of Idaho. The document is entitled *Idaho Ground Water Protection Interagency Cooperative Agreement* and was signed by the Director of the Idaho Department of Water Resources, Karl J. Dreher, on May 30, 1996, the Administrator of Division of Environmental Quality, Wallace N. Cory, P.E., on May 31, 1996, and by the Director of the Idaho Department of Agriculture, Patrick A. Takasugi, on June 28, 1996. The Ground Water Quality Plan directs the MOU to specifically address the roles of IDA, IDWR, and IDHW-DEQ in the implementation of the Ground Water Quality Plan which includes agricultural activities and agricultural chemicals as they relate to ground water.

AGENCY ROLES

The Ground Water Quality Protection Act of 1989 (Idaho Code 39-120) recognizes responsibilities for the three management agencies responsible for protection of ground water quality.

- IDHW-DEQ is designated as the primary agency to coordinate and administer ground water quality protection programs for the state and has the responsibility for collecting and monitoring data for water quality management purposes.
- IDWR has the responsibility to maintain the natural resource geographic information system for the state and is the collector of baseline data for the state's water resources.
- IDA is responsible for regulating the use of pesticides and fertilizers and for licensing applicators.

The roles and authority for IDHW-DEQ, IDA, and IDWR relative to agricultural ground water protection are summarized below. These activities will be conducted in order to effectively implement the Ground Water Quality Plan, and in particular, Policy II-B, the Agricultural Chemical and Nutrient Management Policy.

IDHW-DIVISION OF ENVIRONMENTAL QUALITY (IDHW-DEQ)

This agency is authorized to protect ground water quality from agricultural activities and chemicals pursuant to Idaho Code Title 39, Chapter 1, Idaho Environmental Protection and Health Act. This statute provides the director with authority to adopt rules and regulations and to take enforcement actions to protect public health and the environment.

DEQ's role in the Agricultural Ground Water Quality Protection Program is identified as follows:

MEET GROUND WATER QUALITY GOALS

- Set attainable goals for water quality improvement and protection of beneficial uses.
- As a water quality enforcement agency, periodically review progress of the Agricultural Ground Water Quality Protection Program in meeting water quality standards, drinking water standards, ground water standards, and other specific water quality goals as well as make recommendations for corrective strategy.
- Periodically evaluate applied Best Management Practices (BMPs) via the APAP BMP Technical Committee and the BMP Effectiveness Subcommittee for effectiveness in meeting water quality goals.

- Provide continuity with EPA to assure the Agricultural Ground Water Quality Protection Program meets the goals and procedural requirements of the Federal Clean Water Act.
- Develop and promulgate ground water quality protection rules, in cooperation with other appropriate agencies, as directed in the Ground Water Quality Plan to establish ground water quality standards, and to delineate aquifer categories for the protection of existing and future beneficial uses of ground water.

GROUND WATER MONITORING/DATA MANAGEMENT SYSTEMS

- Conduct regional and local ground water monitoring in accordance with the parameters outlined in the monitoring program section of the Ground Water Quality Plan.
- Develop monitoring programs according to the Ground Water Quality Plan's monitoring program and the Coordinated Nonpoint Source Water Quality Monitoring Program for Idaho, in order to evaluate the effectiveness of the Agricultural Ground Water Quality Protection Program.
- Develop the nonpoint source data management system as described in the Coordinated Nonpoint Source Water Quality Monitoring Program and coordinate with the state's Environmental Data Management System (EDMS).
- Submit ground water quality data related to agricultural activities to the Environmental Data Management System (EDMS).
- Jointly develop, with IDA and other appropriate agencies, project monitoring plans as required for each water quality management plan.
- Issue a Water Quality Status Report for all contracts as required under the Idaho Water Quality Management Plan.
- Coordinate with the production and distribution of an annual Idaho Ground Water Quality Contamination Report jointly with IDA and IDWR.

IMPLEMENTATION OF IDAHO'S GROUND WATER QUALITY PLAN

- Coordinate integration of the APAP including the SAWQP, the Agricultural Ground Water Quality Protection Program, and the State Management Plan (SMP) for pesticides, to be consistent with the Ground Water Quality Plan.
- Participate with IDA and other agencies in the development of the State Management Plan (SMP) for pesticides.

- Jointly develop a Memorandum of Understanding (MOU) with IDA and IDWR to implement the Ground Water Quality Plan.
- Act on recommendations of the Evaluations of the Ground Water Related Programs to ensure programs are consistent with the Ground Water Quality Plan.

IMPLEMENTATION OF THE AGRICULTURAL GROUND WATER PROGRAM

- Jointly with the IDA, NRCS, SCDs, EPA, IDWR, CES, and SCC, periodically review and update the Agricultural Ground Water Quality Protection Program, as needed.
- Participate jointly with IDA, IDWR, SCC, NRCS and other appropriate agencies in the Agricultural Ground Water Quality Coordination Committee as detailed in this document.
- Work with state and federal agencies, user and interest groups to implement the Agricultural Ground Water Quality Protection Program.

DEVELOPMENT OF COMPREHENSIVE STATE GROUND WATER PROTECTION PROGRAM

- Work cooperatively with EPA and other appropriate agencies to develop Idaho's Comprehensive State Ground Water Protection Program (CSGWPP).

IDAHO DEPARTMENT OF WATER RESOURCES (IDWR)

The Department of Water Resources has statutory responsibilities for administering the appropriation and allotment of surface and ground water resources of the state and to protect resources against waste and contamination. IDWR's role in protecting ground water quality from agricultural activities and agricultural chemicals is statutorily defined and includes the following responsibilities:

WASTE DISPOSAL & UNDERGROUND INJECTION WELLS

- Administers the Underground Injection Control (UIC) program in accordance with the Federal UIC Regulations.
- Ensures that all deep injection wells are permitted and that such permit conditions protect the ground water quality of the state.
- Ensures that all deep injection wells are under permit and that a permit condition requires protection of the ground waters of the state from all point and nonpoint sources of contamination.

- Ensures that all active deep injection wells are in compliance with permit conditions through an inspection and monitoring program. Ground water quality data acquired through monitoring will be maintained in a UIC data base which is accessible in the EDMS.
- Ensures that noncompliant deep injection wells are brought into compliance or properly decommissioned in a timely manner.
- Supervise the construction and abandonment (decommissioning) of injection wells to prevent contamination of ground waters by injection well activities resulting from agricultural and nonagricultural activities.
- Inventory shallow injection wells for compliance with IDWR rules, which is administered through agreements with district health and local government offices.
- Provide public I&E on water quality issues related to underground injection wells.

WELL CONSTRUCTION AND WELL DRILLERS LICENSURE PROGRAM

- Administer the training and licensure of well drillers operating in the state of Idaho.
- Collect, review, and maintain an inventory which is accessible to the public of Driller's Reports on each well drilled in Idaho.
- Permit and regulate the proper construction and abandonment of water wells, monitoring wells, injection wells, low temperature geothermal wells or other artificial openings and excavations in the ground which are more than 18 feet deep below land surfaces and are described as a well in the Idaho Well Construction Standards, Rules and Regulations which may provide a source of waste or contamination to ground water.
- Assist the public and well drillers with geological and technical information that will result in the proper construction of wells and the efficient development of the state's ground water resource.
- Supervises the construction or abandonment of wells which are complicated and/or is located in controversial areas.
- Designates and administers Areas of Drilling Concern to protect ground water quality and public health; Administers the Geothermal Resource Management Program.

INJECTION WELLS/IRRIGATION DISPOSAL WELLS

- Irrigation disposal wells are used in Idaho to dispose of irrigation tailwater and nonagricultural runoff water. An injection well may be utilized on an individual farm, in a hydrogeologic basin or by an irrigation district. There are a large number of injection wells in some areas of Idaho. In the Snake River Plain, which is designated a soul source aquifer, there is concern over ground water impacts due to the complexity of the irrigation induced

excess runoff water located in a variety of existing soil and ground water systems. There are documented problems and concerns with some hydrological areas, certain wells, and ground water zones that have been impacted.

- Injection wells drain excess irrigation water and runoff waters due to an area's topography (rolling terrain with depressions having internal drainage), soil (loess soils of relatively low permeability) and geology (successive flows of basalt, dense but fractured near the upper surface and frequently separated by sedimentary deposits and pyroclastic materials).

MONITORING AND GIS SYSTEMS

- Conduct the Statewide Ambient Ground Water Monitoring Program in accordance with the parameters outlined in the monitoring program section of the Ground Water Quality Plan.
- Provide information, training and technical assistance on the EDMS for entities wishing to submit or receive ground water quality data.
- Produce reports, bulletins, information brochures, and other products resulting from analyses of Statewide Ground Water Quality Monitoring Programs.
- Submit ground water quality data related to agricultural activities to the Environmental Data Management System (EDMS).
- Assist in the production and distribution of an annual Idaho Ground Water Quality Contamination Report jointly with IDHW-DEQ and IDA.
- Maintain the natural Geographic Information System (GIS) for the state, as well as a comprehensive ground water data system, currently called EDMS, which is accessible to government agencies and the public.

GROUND WATER CHARACTERIZATION AND PLANNING

- Conduct ground water characterization in cooperation with other appropriate agencies to generate information concerning site-specific and regional characteristics of the ground water system, including elements such as ground water recharge estimates, flow directions and gradients, and identification of lack of confining conditions.

WATER APPROPRIATION AND REGULATORY MANAGEMENT

- Determine the availability of ground water and surface water for allocation to beneficial uses in the state prior to approval of a new appropriation or a proposed change of an existing water right; determine public values, including water quality issues; establish and administer ground water and Critical Ground Water Management Areas; promulgate rules for conjunctive management of surface and ground water to include consideration of ground water issues by the Water Resource Board within the Comprehensive Basin Planning process; adjudicate existing rights to use ground water.

- Conduct ground water quality characterization in cooperation with other appropriate agencies to generate information on site-specific and regional characteristics of the ground water system. The characterization should include elements such as ground water recharge estimates; ground water flow directions and gradients; and identification of the presence or lack of confining conditions.

IMPLEMENTATION OF THE AGRICULTURAL GROUND WATER PROGRAM

- Participate with IDA and other agencies in the development of a State Management Plan (SMP) for pesticides.
- Participate jointly with IDHW-DEQ, IDA, SCC, NRCS, and other appropriate agencies in the Agricultural Ground Water Quality Coordination Committee as detailed in this document.
- Participate in BMP effectiveness reviews.
- Jointly with the SCC, IDA, NRCS, SCDs, EPA, IDHW-DEQ, and CES, periodically review and update the Agricultural Ground Water Quality Protection Program, as needed.

IMPLEMENTATION OF IDAHO'S GROUND WATER QUALITY PLAN

- Jointly develop an MOU to implement the Ground Water Quality Plan with IDHW-DEQ and IDA.
- Act on recommendations of the Evaluations of Ground Water Related Programs to ensure programs are consistent with the Ground Water Quality Plan.
- Assist in the integration of the APAP including the SAWQP, the Agricultural Ground Water Quality Protection Program, and the State Management Plan (SMP) for pesticides to be consistent with the Ground Water Quality Plan.
- Participate with IDA and other agencies in the development of the State Management Plan (SMP) for pesticides.

DEVELOPMENT OF COMPREHENSIVE STATE GROUND WATER PROTECTION PROGRAM

- Work cooperatively with IDHW-DEQ and other appropriate agencies to develop a Comprehensive State Ground Water Protection Program (CSGWPP).

IDAHO DEPARTMENT OF AGRICULTURE (IDA)

IDA has obligations to prevent contamination of ground water from agricultural chemicals and agricultural activities statutorily through the Idaho Pesticide Law, the Idaho Fertilizer Law, the Idaho Chemigation Law, and the Idaho State Management Plan for pesticides.

Additional authority for IDA's role in ground water protection comes through their cooperative enforcement agreement with the EPA to enforce the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in Idaho through joint implementation of the Idaho Ground Water Quality Plan.

Authority for IDA's role to manage dairy wastes comes from Idaho Dairy Rules (Title 37, Chapters 3, 4, 5, and 7, Idaho Code), and the Federal Pasteurized Milk Ordinance, as amended.

IDA's role in the Agricultural Ground Water Quality Protection Program is defined by the following tasks:

PESTICIDES AND FERTILIZER APPLICATION

- Regulates licensing of pesticide applicators.
- Regulates the sale of pesticides and fertilizers in the state as well as monitoring use.
- Collects pesticide sales reports from dealers within the state.
- Cooperates with other agencies in the development and evaluation of Best Management Practices (BMPs) for pesticide and fertilizer use.
- Promulgates rules for pesticide and fertilizer use, establishes minimum training requirements and develops training programs jointly with CES for pesticide applicators.
- Inventory and distribution points of detected or suspected agricultural chemicals within a delineated area. Compile, catalog, and characterize this information.
- Identify potential sources and known sources of agricultural chemical contamination in cooperation with appropriate agencies.

CHEMIGATION PROGRAM

- Regulates the licensing of chemigators to apply fertilizers and pesticides.
- Establishes minimum backflow prevention standards for irrigation equipment which is used for chemigation.
- Monitors and inspects chemigation systems for compliance with the Idaho Chemigation Rules.
- Develops training programs in cooperation with the CES for chemigators.

IMPLEMENTATION OF FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT

- Acts as the lead agency in the development of a State Management Plan (SMP) for pesticides to address the EPA Pesticides in Ground Water Strategy.

NUTRIENT MANAGEMENT

- Cooperates with industry, state and federal agencies to develop plans to address nutrient runoff and water quality impacts from confined animal feeding operations and livestock grazing.

GROUND WATER MONITORING/DATA MANAGEMENT SYSTEMS

- Conduct regional and local ground water monitoring in accordance with the parameters outlined in the monitoring program section of the Ground Water Quality Plan.
- Submit ground water quality data related to agricultural activities to the Environmental Data Management System (EDMS).
- Jointly develop project management monitoring plans as required for each water quality management plan with IDHW-DEQ and other appropriate agencies.
- Assist in the production and distribution of an annual Idaho Ground Water Contamination Report jointly with IDHW-DEQ and IDWR.

IMPLEMENTATION OF IDAHO'S GROUND WATER QUALITY PLAN

- Assist in the integration of the APAP including SAWQP, with the Agricultural Ground Water Quality Protection Program, the State Management Plan (SMP) for pesticides, to be consistent with the Ground Water Quality Plan.
- Act as the lead in the development of the State Management Plan (SMP) for pesticides.
- Jointly develop an MOU to implement the Ground Water Quality Plan with IDHW-DEQ and IDWR.
- Act on the recommendations of the Evaluations of Ground Water Related Programs to ensure programs are consistent with the Ground Water Quality Plan.

IMPLEMENTATION OF THE AGRICULTURAL GROUND WATER PROGRAM

- Jointly with the IDHW-DEQ, NRCS, SCDs, EPA, IDWR, CES, and SCC, periodically review and update the Agricultural Ground Water Quality Protection Program, as needed.

- Participate jointly with IDHW-DEQ, IDWR, SCC, NRCS, and other appropriate agencies in the Agricultural Ground Water Quality Coordination Committee as detailed in this document.
- Work with state and federal agencies, user and interest groups to implement the Agricultural Ground Water Quality Protection Program.
- Participate in BMP effectiveness reviews.

DEVELOPMENT OF COMPREHENSIVE STATE GROUND WATER PROTECTION PROGRAM

- Works cooperatively with IDHW-DEQ and other appropriate agencies to develop a Comprehensive State Ground Water Protection Program (CSGWPP).

In addition to the roles listed above, other state and federal agencies participate in agricultural ground water program responsibilities. These roles are discussed in Appendix B, Agricultural Ground Water Quality Programs.

PROGRAM INTERACTIONS

The Idaho Nonpoint Source Management Program, Agricultural Pollution Abatement Plan (APAP), and State Management Plan (SMP) for pesticides are the major programs that support this Agricultural Ground Water Quality Protection Program. While each of these programs vary in scope and responsibility, collectively they produce a unified effort to prevent ground water contamination from the impacts of agricultural activities and chemicals. The relationship of these programs to the Idaho Ground Water Quality Plan is depicted schematically in Figure 5.

Agricultural ground water protection strategies are best achieved through interagency involvement and expansion of existing programs. Specifically, the coordination of agricultural I&E delivery programs is through the Cooperative Extension System. the SAWQP and the USDA resource management programs provide technical and financial resources for I&E and implementation of BMPs through development of area-wide and site-specific water quality management plans. The APAP is the source for approved BMPs, and provides mechanisms for their development and improvement. The SMP provides mechanisms for restricting use and application of certain leachable pesticides and may also require implementation of BMPs in response to contamination.

Detailed discussions of the above programs along with other agricultural related state and federal programs involved in the protection of Idaho's ground water are found in Appendix B, Agricultural Ground Water Quality Programs.

SCHEMATIC OF MAJOR RELATED DOCUMENTS, PROGRAMS, AND ACTIVITIES

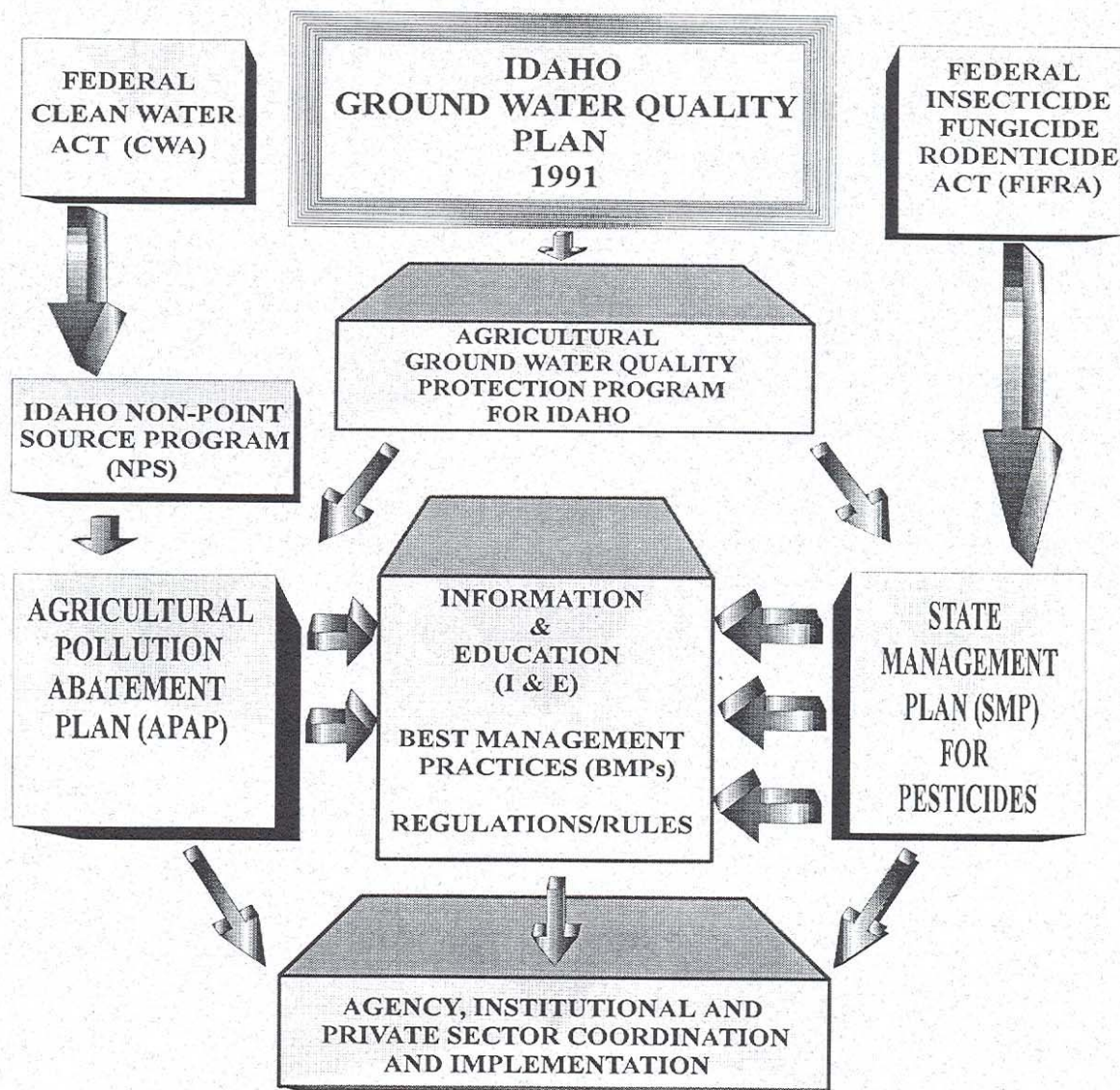


Figure 5. The Idaho Ground Water Quality Protection Plan and the Agricultural Ground Water Quality Protection Program for Idaho are to be utilized in conjunction with other regulatory, planning, and implementation processes in the state of Idaho. Information and education, best management practices, and regulations are to be used in a coordinated manner for achieving the greatest effectiveness and benefit.

APPENDICES

- A. Agricultural Chemical Source Matrix**
- B. Agricultural Ground Water Programs**
- C. Ground Water Quality Council Responses to Public Comments**

AG. CHEM. SOURCE MATRIX TABLE 1

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/RULES
<p>1. AGRICULTURAL CHEMICAL STORAGE AND HANDLING</p> <p>(any site or facility upon which ag chemicals are being stored which may include commercial, on-farm, residential locales)</p>	<p>1. FIFRA; label requirements. EPA, IDA.</p> <p>2. Idaho state pesticide use regulations/rules. (Section 15) IDA.</p> <p>3. Local fire codes and building ordinances, state and local Fire Marshall.</p> <p>4. Recommended guidelines presented in federal and state documents, agricultural journals and from the agrichemical industry.</p> <p>5. UST regulations. EPA, DEQ.</p> <p>6. Drinking Water Standards for community and non-community water supply wells. EPA, DEQ, IDWR.</p> <p>7. RCRA; contaminated soils from commercial applicator storage related spills. EPA, IDA, DEQ.</p>	<p>1. Develop Information and Education dissemination programs at all levels. NRCS, University of Idaho, CES, DEQ, IDA, Industry, IDWR. Policy II-B.</p> <p>2. Expand wellhead protection. IDA, DEQ, Local EPA, IDWR. Policy II-B.</p> <p>3. Development of a State Management Plan (SMP) for pesticides. IDA lead. Policy II-B.</p>	<p>1. Development of a State Management Plan (SMP) for pesticides. IDA lead. Policy II-B.</p>	<p>1. Evaluate existing information and develop standardized guidelines. IDA, Ground Water Review Team (GWR). Policy II-B.</p> <p>2. Broaden scope of applicability Section 15 rules. IDA. Policy II-B.</p> <p>3. Develop state rules for containment measures including SPCC plans at larger facilities. IERC.</p> <p>4. Develop standardized guidelines for containment design. IDA. Policy II-B.</p> <p>5. EPA to finalize storage regulations (CFR Part 165). EPA. Policy II-B.</p> <p>7. Expand wellhead protection. IDA, DEQ, local EPA, IDWR. Policy II-B.</p> <p>8. Development of a State Management Plan (SMP) for pesticides. IDA lead. Policy II-B.</p> <p>9. Coordinate siting of agricultural chemical storage facilities with local planning and zoning entities. IDA, DEQ, EPA. Policy II-B.2.</p>

AG. CHEM. SOURCE MATRIX TABLE 2

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
	INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/RULES
<p>2. AGRICULTURAL CHEMICAL MIXING AND LOADING FOR APPLICATION</p> <p>(includes both permanent and occasionally used sites where ag chemicals are prepared for application; includes commercial and on-farm locales)</p>	<p>1. Develop educational and informational programs at all levels. NRCS, University of Idaho, CES, DEQ, IDA, industry. Policy II-B.</p> <p>2. Expand well head protection at all levels. DEQ, IDA, local EPA, IDWR. Policy II-A.7. Development of SMP. IDA lead. Policy II-B.</p>		<p>1. Evaluate existing information and develop standardized guidelines. IDA, ground water team. Policy II-B.</p> <p>2. Develop state rules/guidelines for proper mixing and loading procedures. IDA, EPA, industry, University of Idaho. Policy II-B.</p> <p>3. Develop design standards for mixing and loading areas (i.e., containment, impervious pads, closed mixing). IDA, industry, EPA, DEQ. Policy II-B.</p> <p>4. EPA to finalize mixing and loading regulations. (CFR Part 165) EPA. Policy II-B.</p> <p>5. Expand well head protection at all levels. DEQ, IDA, local EPA, IDWR. Policy II-A.7. Development of SMP. IDA lead. Policy II-B.</p>

AG. CHEM. SOURCE MATRIX TABLE 3

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/ RULES
<p>3. AGRICULTURAL CHEMICAL APPLICATION/ AGRICULTURAL PRACTICES</p> <p>(application methods, rates and timing of agricultural chemicals and associated cultural practices such as crop rotation, tillage, and irrigation which influence concentrations and mobility of applied agricultural chemicals)</p>	<ol style="list-style-type: none"> 1. BMPs, NRCS; Pesticide, Nutrient and Irrigation Water Management Plans, Conservation Cropping Practice. SCC lead and Technical Committee. 2. NRCS, University of Idaho, CES, and Bureau of Reclamation Irrigation Management Guidelines. 3. Recommended guidelines presented in federal and state documents, agricultural journals, and from the agrichemical industry. 4. FIFRA; labeling requirements, cultural practices restrictions (i.e., tillage). EPA, IDA, University of Idaho. 5. IDA; Chapter 34, Pesticide Law, Chapter 6, Fertilizer Law. IDA. 6. 1990 Farm Bill Water Quality Plan Provisions. USDA, University of Idaho, DEQ, IDA, EPA, SCD. 7. IDWR – Well Construction Standards, well driller licensing. 8. IDWR – Water Rights Season of Diversion. 	<ol style="list-style-type: none"> 1. Develop and implement an SMP. IDA, DEQ, EPA. Policy II-B. 2. Develop informational, educational and research programs (especially promote development and distribution of ground water protection handbooks: Pesticide, Nutrient and Irrigation Management) which address ground water protection from agricultural chemical spills. All entities. Policy II-B. 3. Encourage land user participation in SCD and other local programs that may provide BMP planning, implementation and technical assistance. All entities. Policy II-B. 4. Encourage expansion and continuation of privately (i.e., Farm Bureau) and publicly sponsored ground water quality programs including pesticide use information, vulnerability mapping and others. All entities. Policy II-B. 	<ol style="list-style-type: none"> 1. Develop a cooperative agreement between local Soil Conservation Districts and an operator. This will provide for developing a water quality management plan that addresses surface water and ground water pollution sources, and satisfies all applicable state and federal requirements for water quality protection. This includes the implementation of BMPs. Local SCDs. Policy II-B. 2. Develop and update groundwater quality protection BMPs for agricultural chemical application/cultural practices. SCD lead and technical committee. Policy II-B. 3. Coordinate irrigation programs and other BMPs within CES, NRCS, Bureau of Reclamation, IDWR. Policy II-B. 	<ol style="list-style-type: none"> 1. Develop and implement a SMP. IDA, DEQ, EPA. Policy II-B.

AG. CHEM. SOURCE MATRIX TABLE 4

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/RULES
4. CAFOs (NPDES permitted and nonpermitted confined animal feeding operations of all sizes and all animals excluding aquaculture[i.e., dairies, feedlots, hog operations, etc.])	<ol style="list-style-type: none"> 1. EPA; NPDES Permit, inspection. EPA, DEQ. Dairies - IDA. 2. Idaho Waste Management Guidelines for Confined Animal Feeding Operations. DEQ, technical advisory committee. 3. Rules; compliance checks and complaint response relating to Idaho Water Quality Standards. DEQ. 4. Technical assistance for waste management system evaluation and design. FSA, NRCS, SCD. 5. Financial/cost share assistance for implementation. FSA, NRCS-RCD, SAWQP. 	<ol style="list-style-type: none"> 1. SCDs should include an inventory of statewide CAFO operations in their five year program. SCD. Policy II-B. 2. Develop informational and educational programs for groundwater protection from CAFOs at all levels. Policy II-B. 3. U of I Extension. 4. Idaho Department of Agriculture. 	<ol style="list-style-type: none"> 1. Establish a monitoring and research program to determine the degree of CAFO impacts on groundwater quality. CES/DEQ, IWRRI. Policy II-B. 2. Research to identify alternative methods of waste treatment and management. University of Idaho, NRCS, DEQ, industry. Policy II-B. 3. Provide additional personnel for technical assistance to design and implement CAFO waste management systems. NRCS, DEQ, IDA. Policy II-B. 4. Provide financial/cost share assistance for implementation of CAFO waste management systems. FSA, NRCS-RCD, SAWQP. Policy II-B. 	<ol style="list-style-type: none"> 1. Provide additional personnel for technical assistance to design and implement CAFO waste management systems. NRCS, DEQ, IDA. Policy II-B. 2. Provide financial/cost share assistance for implementation of CAFO waste management systems. FSA, NRCS-RCD, SAWQP. Policy II-B. 3. Address the ground water quality protection shortcomings of the NPDES permit. DEQ, EPA. Policy II-B. 4. Expand and promote Idaho Waste Management Guidelines for CAFOs to address ground water quality protection. DEQ lead. Policy II-B.

AG. CHEM. SOURCE MATRIX TABLE 4

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/RULES
4. CAFOs (NPDES permitted and nonpermitted confined animal feeding operations of all sizes and all animals excluding aquaculture[i.e., dairies, feedlots, hog operations, etc.])	6. IDA rules governing Grade A Pasteurized Milk Program. IDA - Dairy Bureau. 7. IDA dairy laws for Grade B Operations - IDA Dairy Bureau, NRCS, CES, private consultants, DEQ. 8. IDWR water right permitting. 9. MOU with EPA, DEQ, IDA and Idaho Dairymans Association. 10. IDA Dairy Waste Management Inspections Program.		5. Coordinate requirements of all agencies into CAFO management systems. SCC. Policy II-B. 6. Expand and promote Idaho waste management guidelines for CAFOs to address ground and surface water quality protection. IDA lead. Policy II-B.	5. Expand and promote Idaho Waste Management Guidelines for CAFOs to address ground water quality protection. DEQ. Policy II-B. 6. Surface and ground water protection through adoption of Idaho Waste Management Guidelines as rules for Idaho Dairy Farms - IDA. IDAPA 02.04.14 and Idaho Code 37, Chapter 4, March 6, 1992.

AG. CHEM. SOURCE MATRIX TABLE 5

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/RULES
<p>5. AGRICULTURAL CHEMICAL WASTE DISPOSAL</p> <p>(Containers and unused product)</p> <p>(all commercial, on-site farm, residential entities using agricultural chemicals)</p>	<p>Containers:</p> <ol style="list-style-type: none"> 1. FIFRA label requirements. IDA, EPA. 2. CES, EPA recommended practices. CES, IDA, DEQ. 3. DEQ rules, small generator/hazardous materials rules. District health, local governments. 4. Household hazardous materials collection programs. DEQ, HMB, local government, industry. <p>Unused Product:</p> <ol style="list-style-type: none"> 1. RCRA; disposal of hazardous wastes which apply to agricultural chemicals and unrinsed containers. DEQ/HMB, EPA. 2. FIFRA label requirements. IDA, EPA. 3. State authority for IDA to develop rules (Chapter 34). IDA. 4. Idaho's rules and regulations, construction and use of injection wells. IDWR, EPA. 	<ol style="list-style-type: none"> 1. Promote informational and educational programs to address proper disposal of agricultural chemical containers and unused product. At all levels. Policy II-B. 2. Development of an SMP. IDA lead. Policy II-B. 	<ol style="list-style-type: none"> 1. Development of an SMP. IDA lead. Policy II-B. 2. Waste Pesticide Disposal Program, IDA lead. 	<ol style="list-style-type: none"> 1. Evaluate effectiveness of existing programs/rules for ground water quality protection by appropriate agencies/industry. Ground water review team. Policy II-B. 2. EPA to finalize disposal regulations (CFR Part 165). EPA. Policy II-B. 3. Development of an SMP. IDA lead. Policy II-B.

AG. CHEM. SOURCE MATRIX TABLE 6

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/ RULES
<p>6. AQUACULTURE WASTE MANAGEMENT PRACTICES</p> <p>(storage and handling of waste generated from the controlled cultivation of aquatic plants and animals)</p>	<ol style="list-style-type: none"> 1. EPA, NPDES permit, inspection. EPA, DEQ. 2. Technical assistance with facility design and operations from Idaho Aquaculture Association, trade representative, and publications. Industry. 3. Idaho Wastewater Treatment Requirements. DEQ. 4. BMPs; system management. 5. Public interest criteria of water rights. IDWR. 	<ol style="list-style-type: none"> 1. Develop educational and informational programs for aquaculture waste management practices at all levels. Policy II-B. 2. Develop informational and educational programs for ground water protection from aquaculture practices. All levels. Policy II-B. 	<ol style="list-style-type: none"> 1. Development design standards for waste storage ponds/lagoons. DEQ, NRCS, IDA. Policy II-B. 2. Promote research to identify alternative methods of waste treatment and management. University of Idaho, DEQ, SCS, industry. Policy II-B. 	<ol style="list-style-type: none"> 1. Development design standards for waste storage ponds/lagoons. DEQ, NRCS, IDA. Policy II-B. 2. Address the ground water quality protection shortcomings of the NPDES permit. DEQ, EPA. Policy II-B. 3. Evaluate appropriateness of modifying the Idaho water quality storage and wastewater treatment requirements. DEQ lead. Policy II-B.

AG. CHEM. SOURCE MATRIX TABLE 7

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/RULES
<p>7. INJECTION WELLS AND OTHER UNDER-GROUND DISPOSAL METHODS</p> <p>(wells or other methods used to dispose of irrigation tail water and other runoff water in which discharge is directly into the ground water or will likely migrate to the ground water)</p>	<ol style="list-style-type: none"> Underground Injection Control (UIC) Program; exercises primacy that EPA granted Idaho in 1984 under the SDWA to regulate underground injection. IDWR, EPA. Idaho's rules and regulations, construction and use of injection wells. IDWR, EPA. Idaho's well abandonment and well construction standards. IDWR, EPA. Operation Outreach; a program to educate injection well users, government officials and the public of alternatives to injection wells, as well as mitigation measures and proper abandonment procedures. IDWR, EPA. 	<ol style="list-style-type: none"> Continue to improve educational and informational efforts. IDWR, EPA. Policy II-B. Develop guidelines and/or regulations for disposal systems that are not regulated under existing Policy II-B. Encourage land user participation in SCD and other local programs that may provide BMP planning, implementation, and technical assistance. SCD. Policy II-B. 	<ol style="list-style-type: none"> Promote, develop and revise BMPs in regard to increasing water quality and decreasing water quantity of irrigation tail water and other runoff water entering injection wells and other disposal systems. SCC technical committee. Policy II-B. Ascertain the effect of injection well use on ground water quality by obtaining support for research to determine the fate of contaminants entering the subsurface environment through injection wells. IDWR, University of Idaho, IFBF. Policy II-B. Encourage land user participation in SCD and other local programs that may provide BMP planning, implementation, and technical assistance. SCD. Policy II-B. 	<ol style="list-style-type: none"> Identify contributors responsible for low water quality injectate and require that they share responsibility with owner/ operator when more than one person, party, or entity utilizes an injection well. IDWR. Policy II-B. Develop guidelines for disposal systems that are not regulated under existing Policy II-B. Evaluate and revise rules as necessary to provide increased protection from injection wells and other disposal methods; strengthen compliance monitoring and enforcement efforts by obtaining support for increased well inspections, more detailed injectate characterization, emergency response capability, and penalties or well closure. IDWR, EPA.

AG. CHEM. SOURCE MATRIX TABLE 8

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/ RULES
<p>8. AGRICULTURAL CHEMICAL SPILLS</p> <p>(uncontained releases that occur during storage, handling, mixing, loading and transportation of agricultural chemicals)</p>	<ol style="list-style-type: none"> 1. Idaho hazardous materials incident command and response support plan. IERC. 2. SARA, Title III. IERC. 3. FIFRA; packaging. EPA. 4. DOT; transportation requirements. DOT, IT. 5. RCRA; contaminated media from commercial spills/leaks. DEQ, HMB, EPA. 6. Recently passed legislation addressing agricultural chemical spills. 7. Recommended guidelines presented in federal and state documents, agricultural journals and from the agrichemical industry. 8. IDWR well construction and injection well program (UIC). 	<ol style="list-style-type: none"> 1. Develop guidelines for those agricultural chemicals and quantities that are not regulated under existing programs. IDA, IT. Policy II-B. 2. Encourage beneficial uses of spilled material. IDA, DEQ/HMB. Policy II-B. 3. Develop informational, educational and research programs which address ground water protection from agricultural chemical spills. All levels. Policy II-B. 	<ol style="list-style-type: none"> 1. Encourage beneficial uses of spilled material. IDA, DEQ/HMB. Policy II-B. 2. Develop informational, educational, and research programs which address groundwater protection from agricultural chemical spills. All levels. Policy II-B. 3. Encourage the utilization of pertinent research results. All levels. Policy II-B. 4. Upgrade IDWR programs. 	<ol style="list-style-type: none"> 1. Develop guidelines for those agricultural chemicals and quantities that are not regulated under existing programs. IDA, IT. Policy II-B. 2. Upgrade IDWR programs.

AG. CHEM. SOURCE MATRIX TABLE 9

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/RULES
<p>9. URBAN/NON-AGRICULTURAL USES</p> <p>(roadside weed control, right-of-ways, golf courses, residential, commercial, etc.)</p>	<p>1. FIFRA; labeling. IDA; EPA.</p> <p>2. IDA; Chapter 34, pesticide law (professional applicators).</p> <p>3. Recommended guidelines presented in federal and state documents, agricultural journals, and from the agrichemical industry.</p> <p>4. Community awareness programs. IDA, CES, industry.</p>	<p>1. Research studies to determine degree of ground water contamination in urban areas. DEQ, IDA. Policy II-B.</p> <p>2. Develop informational, educational, and training programs for commercial and residential users. All entities. Policy II-B.</p> <p>3. Conduct urban pesticide sales study. IDA. Policy II-B.</p> <p>4. Increased development of outreach programs for information and education. CES, IDA, EPA. Policy II-B.</p>	<p>1. Research studies to identify alternative methods of urban and nonagricultural uses of agricultural chemicals. CES, industry, EPA. Policy II-B.</p>	

AG. CHEM. SOURCE MATRIX TABLE 10

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS
<p>10. LAND APPLIED WASTE AND WASTEWATER</p> <p>(all waste management operations which employ land application for the benefit of crop production.[i.e., aquaculture waste, sludge and septage, animal waste, plant byproducts, etc.]</p>	<ol style="list-style-type: none"> 1. EPA; NPDES permit. EPA, DEQ. 2. Idaho Water Quality Standards and Wastewater Treatment Requirements. DEQ, Technical Advisory Committee. 3. Idaho Wastewater Land Application Permit Rules. DEQ. 4. USDA NRCS Agricultural Waste Mgt. FOTG. USDA, NRCS. 5. IDWR water right permit requirements. 	<ol style="list-style-type: none"> 1. Expand guidance, rules for land application of waste and wastewater management from processing plants, CAFOs and aquaculture operations and other nonregulated land application activities to protect groundwater quality. DEQ, EPA, IDA. Policy II-B. 2. Develop informational and educational programs for ground water quality protection from land applied waste and wastewater. All levels. Policy II-B. 	<ol style="list-style-type: none"> 1. Refine BMPs. SCC technical committee. Policy II-B. 2. Research to identify alternative methods of land application. CES, DEQ, IDA. Policy II-B. 	<ol style="list-style-type: none"> 1. Expand guidance, rules for land application of waste and wastewater management from processing plants, CAFOs and aquaculture operations and other nonregulated land application activities to protect groundwater quality. DEQ, EPA, IDA. Policy II-B. 2. Develop an MOU between appropriate federal/state/local agencies regarding agency roles and responsibilities for land applied waste and wastewater. Policy II-B. 3. Address the groundwater quality protection shortcomings of the NPDES Permit. DEQ, EPA. Policy II-B.

AG. CHEM. SOURCE MATRIX TABLE 11

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/RULES
<p>11. AGRICULTURAL WASTES DISPOSAL</p> <p>(agricultural wastes not addressed in the Agricultural Chemical Waste Disposal, Injection Wells and Other Disposal Methods, and Land Applied Waste and Wastewater categories; for example, treated seed, animal carcasses and crop residue)</p>	<p>1. IDHW Idaho State Solid Waste Rules. DEQ/HMB, local government.</p> <p>2. RCRA, Subtitle D. DEQ/HMB, EPA.</p> <p>3. Guidelines/BMPs. IDA.</p> <p>4. UIC permits and rules, IDWR.</p>	<p>1. Develop educational and informational programs which address proper disposal of agricultural wastes. CES, IDA. Policy II-B.</p> <p>2. Expand and develop guidelines for groundwater quality protection from agricultural wastes. DEQ, IDA, CES. Policy II-B.</p>	<p>1. Evaluate effectiveness of existing programs for groundwater quality protection by appropriate agencies/industry. IDA, DEQ, CES, EPA. Policy II-B.</p>	<p>1. Expand and develop guidelines for groundwater quality protection from agricultural wastes. DEQ, IDA, CES. Policy II-B.</p>

AG. CHEM. SOURCE MATRIX TABLE 12

POTENTIAL AGRICULTURAL CHEMICAL SOURCE	EXISTING PROGRAMS PERTINENT TO SOURCE	RECOMMENDATIONS TO ADDRESS PROGRAM DEFICIENCIES/AGRICULTURAL CHEMICALS POLICY NUMBER		
		INFORMATION AND EDUCATION	BEST MANAGEMENT PRACTICES (BMPs)	REGULATIONS/RULES
12. WELL CONSTRUCTION AND ABANDONMENT	<ol style="list-style-type: none"> 1. Idaho Code and IDWR rules governing well construction standards. IDWR. 2. Idaho Code and IDWR Rules governing water well driller's licenses. IDWR. 3. IDHW rules for individual subsurface sewage disposal systems. IDHW. 4. IDHW Drinking Water Rules for public systems. DEQ. 	<ol style="list-style-type: none"> 1. Increase support for education of IDWR regulatory personnel. IDWR. Policy II-B. 2. Expand public and driller awareness and cooperation through increased communication with IDWR ground water personnel. IDWR. Policy II-B. 		<ol style="list-style-type: none"> 1. Update IDWR Rules to better address water mixing between aquifers and siting of wells near potential contamination sources. IDWR. Policy II-B. 2. Increase support for field inspections for well construction and locating improperly abandoned wells. IDWR. Policy II-B.

APPENDIX B

EXISTING AGRICULTURAL GROUND WATER PROGRAMS MARCH 1993

Many specific and commonly related programs exist for the management of agricultural chemical sources or activities. An important implementation mechanism is to fully utilize and coordinate the various existing programs.

The Agricultural Chemical Matrix (Appendix A, Table 1) presents a preliminary assessment of the existing programs for each of the matrix items. Each assessment contains information related to the various regulatory authorities and the various agencies, institutions, and private sector groups that are involved with each program.

The existing agricultural ground water programs are as follows:

1. EPA Pesticides In Ground Water

Five different statutes administered by the Environmental Protection Agency (EPA) include some provisions for the protection of ground water, including the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). However, the primary legislation which deals with the regulation of pesticides is the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). EPA focuses on the use of FIFRA authorities to address concerns on pesticide contamination of underground aquifers.

The goal of the FIFRA pesticide strategy is to prevent contamination of ground water resources that would cause unreasonable risk to human health and the environment resulting from the normal, registered use of pesticides by taking appropriate actions where such risks may occur.

Under FIFRA, EPA's main role is determining the appropriate regulatory approach for individual chemicals that may threaten ground water. This entails:

- Determine the chemical's potential for leaching into ground waters.
- Determining whether national label restrictions will adequately address leaching concerns.
- In setting national restrictions for chemicals found leaching into ground water, the EPA will take into account appropriate state and local measures to limit leaching.
- Determining whether additional training required by restricted use classification for the pesticide will provide adequate protection, and if not;

- Determining whether providing states with the opportunity to develop a State Management Plan (SMP) for pesticides for the chemical will effectively address the contamination risk.

There may be some pesticides which pose such significant risks to health or the environment due to ground water leaching that a SMP will not be adequate to prevent risks. In these cases, EPA would resort to national cancellation. All of the regulatory decisions cited above, including SMPs, entail a risk-benefit determination, pursuant to the FIFRA definition of “unreasonable risk to man and the environment.”

EPA recognizes that ground water contamination by pesticides can also result from leaks or spills associated with storage, mixing and loading or disposal of these chemicals. To address such “point source” causes of contamination, EPA is developing new regulations under FIFRA to deal with practices associated with storage, mixing and loading, and disposal of pesticide products, as well as with the design of pesticide product containers.

2. State Management Plan (SMP) for Pesticides

EPA’s Pesticides and Ground Water Strategy was developed to describe the policy framework in which the EPA intends to address risks of ground water contamination by pesticide chemicals. The need for such a policy initiative emanated from the detection of various pesticides in a number of ground water systems within the United States and the potential risks to human health and the environment.

The general goal of the Ground Water Strategy is to manage the use of pesticides in order to prevent such adverse effects and to protect the environmental integrity of the nation’s ground water resources. The Pesticides and Ground Water Strategy emphasizes prevention of ground water risks by managing pesticide use in a way that reduces or eliminates the leaching of pesticides to ground water, particularly in vulnerable areas.

The focus of the CSGWPP guidance is the development and implementation of State Management Plan (SMP) for pesticides. The Idaho Department of Agriculture is designated as the lead agency to develop the State Management Plan (SMP) for pesticides. The development and implementation of the SMP will be consistent with the goals and policies established under the Idaho Ground Water Quality Plan and will include the cooperation of other state and federal agencies.

The SMP may be developed by states as a generic SMP or as a chemical specific SMP which will be required for certain EPA identified pesticides which may pose a threat to ground water.

Under the strategy, the use of pesticides which are determined by EPA to “generally pose unreasonable effects to the environment” due to ground water leaching will be restricted to those states which develop chemical specific SMPs. If the EPA determines that a SMP is necessary for a particular pesticide, its legal sale and use would be restricted to states with an approved SMP. Chemical specific SMPs would apply as a label requirement during the pesticide registration process.

There may be some pesticides which pose such significant risks to health or the environment due to ground water leaching that SMPs will not be adequate to prevent risks. In these cases, EPA would resort to national cancellation of the pesticide.

The generic SMPs will address the following twelve components:

- Statement of philosophy.
- Agency roles and responsibilities.
- Legal authority.
- Enforcement mechanisms.
- Resources.
- Basis for assessment and planning.
- Ground water contamination preventative measures.
- Information dissemination.
- Monitoring.
- Actions in response to ground water contamination.
- Public awareness and participation.
- Records/reporting progress.

The generic SMP includes a wide variety of preventative and response measures including user education, additional monitoring requirements, use restrictions or prohibitions, and agricultural BMPs which may include changes in pesticide application rates or timing.

The generic and chemical specific SMP will focus on areas of the state that are vulnerable to ground water contamination. For the chemical specific SMP, the state will consider the vulnerability of the area in which a specific pesticide is used. The state must develop one of three types of chemical specific SMPs: baseline, moderate, or full scale SMP.

A baseline SMP reflects a determination that the pesticide's use poses a minimal risk of contamination throughout the state because of lack of use or low aquifer sensitivity. For example, the baseline SMP would be appropriate for states which show outdoor uses of chemical only in areas of low sensitivity (or no outdoor use). Six of the twelve components must be addressed for the baseline level type SMP. However, the state would commit to move to a higher level SMP if the situation changes or new evidence warrants such action.

A moderate level SMP represents a state's acknowledgement of the potential for ground water contamination by the pesticide in question. A moderate level SMP would be initiated in those states where the chemical's use is confined to areas of low and moderate aquifer sensitivity. Eight of the twelve components must be addressed in this level of SMP.

The full scale SMP will entail addressing all twelve of the required program components in sufficient detail so as to attain the ultimate objective of preventing ground water contamination. The

level of a SMP will be appropriate for a state with a significant level of risk, as indicated by all relevant factors, including site-specific hydrologic characteristics and patterns of chemical use within a state.

While EPA can only require SMPs through a chemical-specific regulatory action, they are encouraging states to take the initiative to voluntarily develop “generic” SMPs which would then form the basis of the state’s chemical-specific SMPs. A generic SMP addresses all of the twelve elements of a pesticide specific full SMP, but in less detail. The EPA is encouraging states to include in their generic SMP non-regulatory approaches to ground water protection such as: the development of safer chemical and nonchemical pest control alternatives, the adoption of integrated pest management strategies, and other practices that reduce the potential for pesticide residues to be introduced into ground water.

3. Clean Water Act (CWA) and Idaho’s Nonpoint Source Management Plan

The Federal Water Pollution Control Act Amendments of 1972 (Clean Water Act) and its subsequent amendments constitute the national water quality policy for the United States of America. This federal mandate is based on the concept that water pollution is controlled by managing effluent quality rather than receiving water quality. The Clean Water Act (CWA) provisions emphasize funding and implementation of preventive pollution control mechanisms through point source effluent treatment and nonpoint source management and planning programs.

Section 319 of the CWA directs states to inventory waters within their jurisdiction that fail to meet water quality standards because of nonpoint source pollution. States then develop a nonpoint source management plan and schedule for controlling nonpoint source pollution. The plan describes the process for identifying BMPs and implementation programs including research, planning, assessments, enforcement, technical assistance, education, and training to protect ground water quality from nonpoint sources of pollution.

Idaho’s Nonpoint Source Management Plan was approved by EPA in December 1989. The process for identifying BMPs for agricultural nonpoint source pollution was developed through the establishment of the Idaho Agricultural Pollution Abatement Plan (APAP), last revised in 1991. The primary implementation mechanism for BMPs approved by the APAP occurs through the Idaho State Agricultural Water Quality Cost Share Program (SAWQP).

4. Agricultural Pollution Abatement Plan (APAP)

The initial stage of the Idaho Agricultural Pollution Abatement Plan (APAP) was in 1979, with Governor Evans’ certification of the “Ag Plan” or agricultural portion of the Statewide Water Quality Management Plan.

The APAP identified areas where water quality impacts could result from agricultural activities, described the agencies responsible for addressing those water quality impacts, identified BMPs

needed to reduce water quality impacts, and presented recommendations related to changes needed to reduce agricultural nonpoint source pollution. These recommendations focused on a voluntary program recognizing the need for adequate technical assistance to farmers and ranchers to identify problems and solutions, the need for adequate Information and Education activities to raise awareness of agricultural pollution problems and make solutions available, and the need for adequate incentives for BMP installation to offset costs of pollution control which benefits the public as well as the agricultural operator.

The 1991 revision of the Agricultural Plan is consistent with and meets the goals of the Idaho Nonpoint Source Management Program (1989) and meets the requirements of Section 319 of the Federal Clean Water Act. The NPS Management Program identified a number of impacts resulting from agricultural uses which were not adequately addressed in the Agricultural Plan. Those impacts included a need for increased emphasis on livestock grazing/riparian management, non-permitted livestock confinement areas, agricultural chemical management, ground water protection and wetlands. The state also adopted an Anti-Degradation Policy and passed the Idaho Ground Water Quality Protection Act which the Agricultural Plan needed to address and be compatible.

The objectives for the 1991 Agricultural Plan focus on the requirements of the Federal Clean Water Act “to restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” The goal in Idaho is to restore and maintain the State’s waters impacted by agricultural nonpoint sources to fully protect identified beneficial uses of the state’s waters.

Individual agricultural landowners and operators are working in cooperation with numerous governmental entities and organizations to achieve that goal. There are 29 governmental entities (16 federal, 9 state and 4 local) involved in agricultural pollution control in Idaho. The state’s 51 Soil Conservation Districts (SCDs) are the localized lead groups, each with locally elected supervisors who serve voluntarily. The SCDs with the Idaho Soil Conservation Commission (SCC) to carry out their water quality activities.

The Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ) is the lead state water quality management agency. Federal agencies intensively involved in the program include the United States Forest Service (USFS) and United States Bureau of Land Management (BLM) which are the designated management agencies for federal lands within the state under Section 208 of the Federal Clean Water Act. Coordinated Resource Management Plans (CRMPs) provide an effective way of reducing pollution on lands with mixed ownership.

In order to determine where to direct efforts to reduce agricultural nonpoint source pollution, priorities are set. The local SCDs set priorities in each district by incorporating stream segments, lakes, aquifers and wetlands impacted by agricultural activities into their five year programs.

To reduce and prevent pollution, agricultural operators install and maintain BMPs. In order to be acceptable in Idaho, BMPs have to be feasible, both technically and economically, and also socially acceptable.

A BMP Technical Committee composed of representatives from technical agencies review, evaluate and recommend component practices to be used to develop agricultural BMPs. Monitoring and evaluation are critical to determining the effectiveness of agricultural pollution control. The BMP Feedback Loop is an integral part of the process (Figure 4, page 80).

5. State Agricultural Water Quality Program (SAWQP)

The Idaho State Agricultural Water Quality Program (SAWQP) is the state planning and implementation program of choice for assisting agricultural operators installing BMPs on private lands. The 1980 Legislature authorized SAWQP with funding from the Water Pollution Control Account. The legal authority was granted to the Idaho State Board of Health and Welfare, Division of Environmental Quality (DEQ) under Sections 39-105 (2) and 39-601 of Idaho Code to adopt the rules for the administration of the program.

SAWQP assists the SCDs in the control and abatement of contamination resulting from agricultural activities. The program provides technical assistance and funding for water quality planning and BMP implementation projects. The BMPs and component practices used in SAWQP cost share contracts are listed in the APAP.

Planning projects begin by a SCD applying for a planning grant to characterize the water resources within its boundaries. Planning projects are initiated by SCDs based on listing and priority of water quality conditions according to the APAP. If funding is awarded, the district coordinates an interagency, interdisciplinary effort to investigate the resource concerns.

The projects generally entail two to three years of investigation. A report detailing the documented water quality impacts related to agricultural nonpoint source pollution is prepared. The report contains recommendations for selected treatment alternatives.

If a planning report indicates that significant water quality problems exist and viable treatment alternatives are available, the district can request funding from SAWQP to implement a treatment plan. Funding is available for project administration and monitoring, information and education activities, technical assistance, and cost sharing with agricultural operators who apply agricultural water quality BMPs. Through SAWQP planning projects, watershed assessments have been developed on more than four million acres of agriculture, forest and other land since the program's inception in 1981.

If selected for an implementation project, the SCD signs a grant agreement for funds to implement the project plan and becomes the sponsor of the project. Owners and operators of critical agricultural lands within the project boundaries contract with the sponsoring district to apply agricultural BMPs.

Through those contracts, a participant can receive cost sharing for up to seventy-five percent of the cost of practice installation, but not to exceed \$50,000. These participants sign BMP installation contracts which extend for periods of five or ten years.

BMP effectiveness reviews are performed annually on selected projects to determine their effectiveness in protecting water quality. The BMPs and component practices are evaluated as to adequacy of installation and maintenance, and any water quality protection benefits obtained. Program evaluations are conducted annually to determine BMP implementation progress and to assess the effectiveness of each project in reducing agricultural pollution.

Where appropriate, SAWQP and USDA programs are integrated at the state level to maximize nonpoint source water quality protection from agricultural activities. Nonpoint source water quality protection is coordinated with USDA at the national level through the integration of state Nonpoint Source Management Programs in the Water Quality Incentive Program of the 1990 Farm Bill.

6. USDA Water Quality Initiatives

The USDA is made up of a number of different agencies with specific roles and responsibilities. Three primary agencies interrelated and responsible for agricultural management on private lands include the Natural Resource Conservation Service (NRCS), Agricultural Stabilization and Conservation Service (ASCS), and University of Idaho Cooperative Extension Service (CES). The NRCS provides technical assistance and administers various NRCS programs, ASCS administers cost-share and agricultural commodity programs, and CES is designated as the educational arm of the USDA.

6.1 Ongoing Water Quality Programs

6.1.1 Conservation Operations Program

The Conservation Operations Program provides technical assistance to individuals and groups of landowners, establishing one of the most important links the NRCS has to water quality and the implementation of conservation practices. The one-on-one technical assistance provides farmers and ranchers with information and detailed plans necessary to conserve their natural resources and improve water quality.

6.1.2 Public Law 83-566 Small Watersheds

Public Law 83-566 authorizes the NRCS to cooperate with state and local entities in planning and carrying out efforts for improving soil conservation and other purposes. The program provides for technical and financial assistance. Current program priorities for planning authorizations include water quality improvement projects, upstream flood control projects and water conservation projects. Projects which provide benefits to the disadvantaged and/or multipurpose projects will receive additional priority.

6.1.3 Cooperative River Basin Studies (CRBS) Program

The Cooperative River Basin Studies (CRBS) program allows for cooperative investigations and surveys with other federal, state, and local agencies for appraising water and related land resources, and formulating alternative plans for conservation, use and development. CRBS products should be instrumental to resource managers and decision makers in understanding and solving their resource problems. Current program priorities include improving water quality, protecting or restoring wetlands, reducing upstream flood losses, and drought management.

6.1.4 Resource Conservation and Development (RC&D) Program

Through locally sponsored areas, the RC&D program assists communities to expand economic opportunities through wise use and development of natural resources by providing technical and financial assistance. Program assistance is available to address problems including water management for conservation, utilization and quality, as well as water quality through control of nonpoint sources of pollution.

6.2 USDA Farm Bills

6.2.1 1985 Food Security Act (FSA)

The Food Security Act of 1985 eliminated eligibility for USDA program benefits for persons who produce agricultural commodity crops on highly erodible lands unless a conservation plan, approved by the local Soil Conservation District, is being applied.

The 1985 Farm Bill also supported wetland conservation and prohibited planting an agricultural commodity on a converted wetland. Converted wetlands or swampbusters were considered to be those lands which drainage or other modification commenced after December 23, 1985. Another conservation provision of the 1985 FSA was the Conservation Reserve Program (CRP). This program allowed owners of eligible land, primarily Highly Erodible Land (HEL), to remove that land from agricultural production by converting it to permanent vegetation for a period of 10 years. In return, the USDA would pay the landowner an annual rental payment based on a bid price submitted by the landowner.

6.2.2 1990 Food, Agriculture, Conservation and Trade Act (FACTA)

The Food, Agriculture, Conservation and Trade Act of 1990 strengthened some of the provision of the 1985 bill and added good faith provision for persons who accidentally or inadvertently violated the conservation compliance provision of the act. Under the 1990 FACTA, much more emphasis was placed on all resource concerns, especially water quality. Existing programs were expanded and new programs were created to better target water quality and other environmental concerns.

The principal conservation program under the 1990 FACTA included the Agricultural Resource Conservation Program which was made up of the Environmental Conservation Acreage Reduction Program (ECARP) and Water Quality Incentive Program (WQIP).

The ECARP was established to assist owners and operators of HEL, as well as other fragile lands (including land with associated ground and surface water that may be vulnerable to contamination), and wetlands, in conserving and improving the soil and water resource. ECARP included CRP and the Wetland Reserve Program (WRP).

The WQIP was specifically created to provide water quality protection, including the source reduction of agricultural pollutants. The program was established to assist owners and operators of lands in eligible areas implement three to five year agricultural water quality protection plans. Protection plans protect ground and/or surface water from potential contamination by agricultural nonpoint sources of pollution through the use of incentive payments to secure changes in management systems.

6.2.3 1996 Federal Agricultural Improvement and Reform Act (FAIRA)

The conservation provisions in the 1996 Farm Bill will affect farmers well into the next century. The new provisions build on the conservation gains made by landowners over the past decade. They simplify existing programs and create new programs to address high priority environmental protection goals. Here is a quick summary of some of the key provisions:

- The new Environmental Quality Incentives Program consolidates the functions of four existing conservation programs into one and focuses assistance to locally-identified conservation priority areas or areas where agricultural improvements will help meet water quality goals. In fiscal year 1996, \$130 million will be available. After that, the program will be funded at \$200 million annually. Funds will pay for technical assistance and cost-sharing on conservation practices. Fifty percent of the funds are dedicated to conservation associated with livestock operations.
- The popular Wetlands Reserve Program and Conservation Reserve Program are extended through 2002. Changes provide landowners more options for protecting wetlands and highly erodible lands. In the Wetlands Reserve Program, landowners will now be able to choose either permanent or 30-year easements, or restoration only cost-share agreements.
- A new Farmland Protection Program will provide up to \$35 million to help farmers preserve their land in agriculture. The program provides assistance to states with existing farmland protection programs to purchase conservation easements.

- Current swampbuster and wetlands provisions from the 1985 and 1990 Farm Bills were modified to provide farmers with more flexibility to meet wetland conservation compliance requirements. Changes include expanding areas where mitigation can be used, allowing mitigation by restoration, enhancement or creation and changing the abandonment clause.
- The new Wildlife Habitat Incentives Program provides \$50 million over the next seven years to help landowners improve wildlife habitat on private lands.
- Conservation Compliance was changed to direct USDA employees who are providing on-site technical assistance to notify landowners if they observe potential compliance problems. Landowners will have up to one year to take corrective action. County committees are authorized to provide relief in cases of economic hardship.
- A Flood Risk Reduction Program was established that allows farmers who voluntarily enter into contract to receive payments on lands with high flood potential. In return, participants agree to forego certain USDA program benefits. These contract payments provide incentives to move farming operations from frequently flooded land.
- The Emergency Watershed Protection Program was amended to allow the purchase of Floodplain Easements.
- The new Conservation of Private Grazing Land initiative offers landowners technical, educational and related assistance on the Nation's 542 million acres of private grazing lands.
- The National Natural Resources Conservation Foundation is created as a nonprofit corporation to fund research, education and demonstration projects related to conservation.
- Membership in the State Technical Committees, the group which provides guidance on technical standards for conservation programs, was broadened to include agricultural producers and others knowledgeable about conservation.
- A new Conservation Farm Option was created for producers of wheat, feed grains, upland cotton and rice who are eligible for Agricultural Market Transition contracts. Under this pilot program, landowners may consolidate their CRP, WRP and EQIP payments into one annual payment. The participants enter into a 10-year contract and agree to adopt a conservation farm plan.
- Under the interagency Wetlands Memorandum of Agreements, the definition of agricultural land was expanded to include not only cropland and pastureland, but also rangeland, native pastureland, other land used to support livestock and tree farms.

APPENDIX C

Ground Water Quality Council Responses to Public Comments

This section lists the comments received during the public comment period. The comments are listed individually by exhibitor. Each comment is followed by the Ground Water Quality Council's response, including how that comment has been incorporated to the text of the plan. There are two sections, one listing the written comments received, and another detailing the verbal comments received at the five public hearings held throughout the state.

WRITTEN COMMENTS

Exhibit 1

This comment expressed this group's concern with the emphasis AGWQPP is placing on voluntary Best Management Practices (BMPs), a better clarification of the role and responsibilities of the Agricultural Ground Water Coordination Committee (AGWQCC), and their desire for broader representation on the AGWQCC. This comment also provided three recommendations:

1. Replace voluntary BMPs with mandatory BMPs backed by a site-specific enforceable regulatory framework.
2. In the absence of any legislative or administrative authorization, the AGWQCC shall be advisory to the Director of the Division of Environmental Quality.
3. The AGWQCC membership should be expanded to include representatives from the United States Forest Service, Idaho Fish and Game, Idaho Rural Water Systems, Idaho Association of Counties and the Association of Idaho Cities.

Response:

1. Voluntary BMPs are being evaluated in terms of their ability to identify potential problems and protect ground water quality. The AGWQPP methodology provides (please refer to the Prevention Flowchart, Figure 2, page 71):
 - a. An Information and Education Strategy based on the concept that "an informed public is more likely to prevent contamination voluntarily without the need for regulatory programs." (GWP Plan, Policy III-A.)
 - b. A BMP Strategy that identifies the BMP, which is then monitored and evaluated.

- c. A Regulatory Strategy that is a site-specific, enforceable regulatory framework which is implemented when the BMP Strategy is not meeting water quality objectives.
2. As indicated on page 76 in the AGWQPP, it is not the responsibility of the AGWQCC to establish rules. “This committee is intended to enhance, not replace, the regulatory process initiated by an agency with specific program authority.” The following verbiage will be added to the AGWQPP, third paragraph on page 76 to better clarify the AGWQCC’s role: “The Agricultural Ground Water Quality Coordination Committee will perform in an advisory capacity and will report to the Ground Water Quality Council or its successor, or in their absence shall be advisory to the agency with specific program authority.”

The Agricultural Chemical Subcommittee will review the AGWQCC statement of purpose, role and responsibilities and will make recommendations to clarify as appropriate.

3. The AGWQCC is intended to be inclusive and membership beyond what is specified on page 77, will require review and approval by the Ground Water Quality Council. The following verbiage will be added to the AGWQPP, fifth paragraph on page 77, to provide some flexibility and inclusiveness to AGWQCC membership: “The membership of the Agricultural Ground Water Quality Coordination Committee may be adjusted to include additional federal and state agencies, water user groups, local government representatives, or other stakeholders approved by a majority vote of either the Ground Water Quality Council or its successor.”

Exhibit 2

This group expressed general approval and is supportive of the voluntary nature of the BMP strategy. They stressed two points of particular support: 1. Regulatory action is reserved for situations where water quality objectives are not being met, and 2. BMPs are being developed to address potential impacts for both surface and ground water quality, and that they are being developed and implemented before contamination occurs. This group made one recommendation that the AGWQCC activities under the *Mechanisms for Implementation* section (pp 76-77) be expanded to include the development of meaningful incentives for growers to adopt voluntary BMPs.

Response:

Federal and state agencies and private sector organizations presently utilize various forms of incentives to promote the adoption of voluntary BMPs. The Natural Resource Conservation Service, Idaho Department of Health and Welfare-DEQ, Idaho Department of Water Resources and Idaho Power, to name a few, work with their constituents to identify sources for cost sharing activities and other incentives. The following verbiage will be added to the role of the BMP Effectiveness Subcommittee (paragraph 1, page 77) to stress the importance of incentives to voluntary BMP adoption: Identify sources for BMP cost sharing and incentives.

Exhibit 3:

The commentor indicated general support of the AGWQPP and its methodology of going from education and implementation through Best Management Practices, and then enforcement. The commentor also approved of the AGWQPP's philosophy of not placing an unnecessary bonus of blame, or responsibility on either the regulated community or the regulators. The commentor went on to stress that even though the impetus is through education, there will have to be more staff provided to make the technical transfer from the draft AGWQPP as it now exists to actual implementation in the agricultural community. This will require that recommendations be made to the state legislature to add more staff to facilitate the implementation of the AGWQPP.

Response:

The Ground Water Quality Council will pass this recommendation to the Idaho Water Resource Research Institute (IWRRI) and the Cooperative Extension System (CES) for review. IWRRI and CES are represented on the Agricultural Ground Water Quality Coordination Committee, and have cognizance over ground water and agricultural education activities.

VERBAL COMMENTS**Coeur d'Alene Public Hearing**

The commentor was generally supportive of the program's emphasis on Information and Education, BMPs and enforcement as the last resort. Therefore, the commentor felt that more Extension staff is needed to make the technical transfer of this program to the agricultural community and assure that its implementation is accomplished.

Response:

The comment has been taken under consideration.

ACRONYMS

ACP	Agricultural Conservation Program
APAP	Agricultural Pollution Abatement Plan
ASCS	Agricultural Stabilization and Conservation Service
BLM	Bureau of Land Management
BMPs	Best Management Practices
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CES	Cooperative Extension Service
CRBS	Cooperative River Basin Studies
CRMPs	Coordinated Resource Management Plans
CRP	Conservation Reserve Program
CSGWPP	Comprehensive State Ground Water Protection Program
CWA	Clean Water Act
DEMOS	Water Quality Demonstration Projects
ECARP	Environmental Conservation Acreage Reserve Program
EDMS	Environmental Data Management System
EPA	Environmental Protection Agency
FBL	Feed Back Loop
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FSA	Food Security Act
GIS	Geographical Information System

GWQ	Ground Water Quality
GWQC	Ground Water Quality Council
GWQP	Ground Water Quality Plan
HEL	Highly Erodible Land
HUAs	Hydrological Unit Area Projects
I&E	Information and Education
IASCD	Idaho Association of Soil Conservation Districts
IDA	Idaho Department of Agriculture
IDHW-DEQ	Idaho Department of Health and Welfare - Division of Environmental Quality
IDL	Idaho Department of Lands
IDWR	Idaho Department of Water Resources
NPS	Nonpoint Source
NRCS	Natural Resource Conservation Service
QAPP	Quality Assurance Project Plan
RC&D	Resource Conservation and Development
RCRA	Resource Conservation and Recovery Act
SAWQP	State Agricultural Water Quality Program
SCC	Soil Conservation Commission
SCD	Soil Conservation District
SDWA	Safe Drinking Water Act
SMP	State Management Plan for Pesticides
TSCA	Toxic Substance Control Act

U OF I	University of Idaho
UIC	Underground Injection Control
USDA	United States Department of Agriculture
USFS	United States Forest Service
WRP	Wetland Reserve Program
WQIP	Water Quality Incentive Program
WQS	Water Quality Standards
WQSP	Water Quality Special Project